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COMMON CAUSES OF HAIR LOSS IN MALE AND FEMALE AND SOME RECOMMENDATIONS AS TO TREATMENT†

● Hair loss and its associated problems has been so long with us, that there is danger of approaching it with a certain feeling of complacence. Faced with the knowledge that every year Americans are spending 300 million dollars in many and various, but inevitably vain efforts to restore lost hair, physicians are cautioned to treat this problem for what it is, a deeply rooted enigmatic group of diseases, all of which have far reaching consequences to the person involved.

Elmer R. Gross, M.D.

From time immemorial, most bald headed men have shared a common sensitivity. Not one solitary hair could be restored on Caesar's head despite the finest hair tonics and treatment available to him in ancient times, and even in the light of our present day scientific sources, a transformation is the only reliable method to cover a frank baldness.

Very few medical problems produce more emotional strain, and more anxiety manifestations, than hair loss.

Only castration can prevent, or cure, male pattern baldness. Those castrated before puberty do not become bald, and those castrated during maturity stop losing their hair. This operation is not advocated as a prophylactic or curative procedure, even though it appears to augment the false supposition that baldness and virility are practically synonymous. Androgen is only a contingent factor since many normal men keep their hair. Before I proceed with this hoary hirsute task, I should like to give you a working classification of alopecia, which includes the environmental and physiologic divisions.

I. The Environmental is subdivided into the cicatricial and non-cicatricial categories:

  a. Cicatricial Alopecias embraces the following:

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†Presented October 17, at the 1933 Class Reunion, University of Michigan Medical Center Alumni Society Conference.

Dr. Gross, former Associate Professor of Dermatology at Temple University Medical Center, is on the active Dermatologic Staff of the Delaware, Memorial, St. Francis and Wilmington General Hospitals, Wilmington, Delaware.

1. Physical Agents: x-rays, 3rd degree burns.
2. Bacterial Infections: Leprosy, tuberculosis, late syphilis, furuncles, carbuncles.
3. Ringworm Infections: Kerion, favus.
4. Chemical Agents: Caustics.
5. Viral Infections: Severe Herpes Zoster.
6. Atrophic Cutaneous Diseases: Scleroderma, Lupus Erythematosus.
7. Neoplasms and granulomas.

b. Non-Cicatricial Alopecias include:
   1. Congenital ectodermal defects.
   2. Mechanical: Exotic hair styles, curlers, brushes.
   3. Post-operative: Sites of pressure, occiput in trendelenberg position over one hour.
   4. Psychocutaneous: Trichotillomania, alopecia areata, alopecia prematura.
   5. Endocrine: Hypothyroidism, post partum hair loss.
   6. Infectious diseases with high fever: Typhoid, pneumonia, upper respiratory infections, exanthema.
   7. Chemicals and drugs: Thallium (rat poison), cytotoxic agents, anticoagulants (heparin), excessive intake of Vitamin A.
   8. Spirochetal Infections: Early syphilis.
   9. Severe Seborrheic States.

II. Under Physiological Alopecias, I include:
   a. Male pattern baldness
   b. Female pattern baldness
   c. Cyclic hair loss

Since my title, common causes of hair loss, immediately excludes the rare dermatologic entities, I shall confine this presentation to those most frequently seen by the physician. More and more often we hear the complaint from women: 'Doctor, I'm losing my hair, will I become bald?" This is usually followed by a scene which manifests an anxiety state.

A regal head of hair is a woman's crowning glory, as is evidenced by broken medical and dental appointments to keep one at a beauty parlor. These very same creatures create a scene in your office if they are not seen promptly, yet they are as mild as ranch minks when they enter the inner sanctum of their hairdresser. Oh, creator of exotic hair styles, my time is in thy hands!

We dermatologists admit that there is a marked increase in incidence of diffuse hair loss in women between the ages of 25 and 50. I should like to coin the term, '*glamorpecia*,' for this group who subject themselves to the tortures of hell, and rightly suffer an emotional turmoil directly proportional to the procedures they subject themselves to, namely: hot waves, cold waves, bleaching, blanching, steaming, stripping, curling, teasing, brushing, combing, frosting, spraying, dyeing, pulling; mechanical traction with brush rollers, plus rinses, sets, do it yourself kits, and anything else to gild the lily. In fact, young daughters are starting with the "parting" of their hair when their mothers insist on tight pony tails.

"Glamorpecia"

These bouffants, beehives and exotic hair styles put the lice infested "plica polonia" to shame. You will recall that Dr. Wile* lectured to us about the Polish ladies of nobility in days of yore, who grew a veritable menagerie of pediculi on their heads, and, with the accompanying pruritis, excoriation, and bloody crusts that ensued, their sky scraper coiffures were matted, but at least they didn't lose their hair. The pediculi kept a close scrutiny, and a closed shop.

The healthy scalp loses an average of 20 to 40 hairs daily, but this is fortunately balanced by a regrowth to replace this continuous physiologic process. This rate varies in different persons and at different times; however, it is well within an established normal limit.

Before the diagnosis of "glamorpecia" is established, it is essential that the physician rules out other causes of hair loss. Pregnancy, which frequently causes a hair loss after the first trimester, and post partum hair loss, I will deal with separately. Rule out hair loss due to medication, such as cytotoxic drugs and anti-coagulants. It is also necessary to exclude high fever, female pattern baldness, cicatricial, and non-cicatricial dermatoses, endocrine and metabolic disturbances, seborrheic states, and psychocutaneous disorders. If these conditions are eliminated, and they can be by the experienced clinician, then the instructions for the regimen of therapy should be distinct and emphatic:

---

*Lectures to the Junior Class, University of Michigan Medical Center.

1. Only prescribed local preparations should be allowed the patient.
2. Proper hygiene and care of the scalp should be outlined by prescribing hypoallergenic preparations without sensitizers such as hexachlorophene. If we are to believe pharmaceutical manufacturers, we would say "if it isn't hexed, it isn't good." A simple handbook on the proper care of the scalp can be distributed to the patient.
3. Mechanical devices such as rollers, rats, and clamps should be avoided. Women who persist in their use wouldn't think of raking their new sprouting lawn, yet by the same token, they will tease and pull their hair unmercifully. They are much kinder to their pet poodles.
4. Above all, these patients need reassurance that they will not become bald; thus assured, they will immediately replace their ominous clouds with sunshine, thereby relieving their anxiety.
5. General supportive and hygienic measures are advocated when necessary.
6. There is absolutely no contraindication, if these patients wish to wear a wig, this is perhaps the most sensible approach and should be adopted.

Post Partum Alopecia

This has been attributed to an acceleration of conversion of hairs from the anagen (growing) to the telogen (resting) stage by Lynfield.[1] Van Scott[2] observed an increased proportion of telogen hairs in this group of patients. Kligman,[3] in his observations, also noted a high telogen count. But what produces this increased resting stage of the hairs postnatally? Behrman,[4] thinks that this alopecia may be the result of an estrogen deficiency state. Schiff and Kern,[5] support the theory that hormonal mechanisms are responsible.

I have reported[6] that following Caesarian section in dogs and cats, the animals shed an abnormal amount of hair. If animals are left unattended, they instinctively ingest their placentae for self protective and physiologic reasons, the latter so as not to be "out of coat" as termed by the veterinarian. To substantiate these findings, placentae were withheld from dogs following normal whelping. Again, there was an excessive shedding of the hair.

Placental extract, in the form of five grain tablets, was given to patients complaining of post partum hair loss. In three months, there was a thicker growth of hair than the control series, which took from at least six months to one year. Without any specific treatment, the hair should return but may be thinner and sparser.

Psychocutaneous Disorders

Hair loss may be a manifestation of psychosis, or a neurosis. I included in this category the following: trichotillomania, psychotic states, alopecia areata and alopecia prematura.

Trichotillomania

Trichotillomania is characterized by an abnormal desire to pull out the hair, this is usually a manifestation of a compulsion neurosis. Generally, readily accessible areas are involved such as the frontal portion of the scalp, eyebrows, or eyelashes. Needless to say, psychiatric screening is indicated in this group of patients.

Psychotic States

Be suspicious of the patient who complains bitterly about hair loss, and brings along the evidence; their hair combings wrapped up neatly in a tissue. This patient's complaints are out of all proportion to the clinical findings. In my experience, this group chiefly comprises sub-clinical manic-depressives, and may eventuate to a full blown psychotic state.

Alopecia Areata

As a common cause of hair loss, this condition is easily recognized, and readily diagnosed, by its asymptomatic abrupt onset, occurring in single, or multiple round, non inflammatory patches. Myriad etiologic factors have been suggested, from the sublime to the ridiculous, however, the concensus of opinion stresses emotion as the underlying cause.

Oral Corticosteroids, and those given by intralesional injection will produce regeneration of hair by suppressing the inflammatory infiltrate surrounding the papillae. The effect may be short lived when the therapy ceases. I needn't tell you that this approach is fraught with many complications.

In all liklihood, stress, duress, and anxiety exists in these patients, producing a resting phase of the follicle with a subsequent hair loss. Supportive and hygienic measures wherein indicated, as well as psychotherapy in the form of local applications and reassurance, will handle the majority of these patients; the prognosis is good.

Apolecia Prematura

I define this entity as an abnormal hair loss occurring during the stress years from 18 to 25. I believe that tension, stress, and strain plays the chief role in the production of this diffuse hair loss. During a given physiologic stress period, there is a diminution of the anagen (growing) phase; thereby creating an excess of telogen (resting) hairs thus producing an abnormal defluvium.

We are all too familiar with excessive hair loss occurring in students during trying examination periods, and in patients who are literally "burning the candle at both ends." Business reversals, domestic, and financial difficulties, family illness, and a host of other problems with which these persons can't cope at the particular time, are conducive to varying degrees of anxiety and its concomitant signs and symptoms. This group of patients should be handled like the aforementioned alopecia areata group.

Temporary vasoconstriction, which supposedly decreases the blood supply to the scalp, has often been suggested as a pathogenic factor in hair loss. In 1955, I treated 150 patients, with various types of non-cicatricial alopecia, with Roniacol,* an alcohol fraction vasodilator corresponding to nicotinic acid. My control group included a corresponding number of patients, one third of whom received pure cystine; the next third multiple vitamins, and the remaining one third, parenteral placebo therapy.

After one year's observation, I saw no difference in the results with the Roniacol group, and the control series. When the Roniacol appeared to be beneficial, it served as a psychotherapeutic adjuvant, similar to the doubtful positive results in the control series.

The idea that a preparation rich in cystine might promote hair growth seems to have been reasonable in the light of Brown and Klauder's[7] work.

Cystine is the keystone in the formation of keratin, the chief constituent of hair and nails. They found that the administration of cystine was too expensive, so they selected wool that was hydrolyzed. This brown, viscous liquid was foul smelling and rank tasting, and I doubt whether patients ever followed instructions and completed a full course of treatment.

In 1951, I resurrected and refined the therapy by employing pure cystine, which I gave to a series of 350 patients with noncicatricial alopecia, and needless to say, I have only negative results to report. Only one consoling remark by a patient made me feel that this study was not done in vain. Quote, "Doctor, where can I obtain some more of those tablets? They kept my bowels open."

In handling patients in this category I would advocate local hygienic, general supportive measures, and a suitable psychotherapeutic approach to allay the patient's fears until a normal physiologic balance is established.

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*Supplied by Hoffman-LaRoche, Inc.

Male Pattern Baldness

Common male baldness is observed by all, and experienced by many. To qualify for this selected group one must earn his letter M; when the frontal hair line acquires this formation because of a marked fronto-parietal recession. Usually, the earlier in life this occurs, the more rapid the progression. After the acquisition of the M, an O is acquired in the form of an oval bald spot over the crown. The procedures may be reversed, or interlaced. This hair loss varies in its severity and wake, regeneration is feeble, and this hair loss is distinctly permanent.

What about the pathogenesis and etiology? Pick the right parents and grandparents. The first factor is inheritance with a definite familial incidence in the forebears. If the genes are against you, you've had it!

With regard to treatment, castration before puberty definitely prevents baldness, yet eunichs given excessive amounts of androgen will not suffer hair loss unless the genetic susceptibility is present and there is a male pattern baldness background in the family. Those castrated during maturity stop losing their hair. However, I doubt that this operative procedure will ever become a popular cure, or preventive, for male pattern baldness.

Massage, stimulating agents, estrogenic creams, hormonal approach and all the nostrums that have occupied mankind since antiquity, are definitely not of proved value, therefore, we have to rest our laurels on our manhood, since the association of virility with baldness is debunked. So—go forth thou bald head, or cover your shining glory with a transformation.

Female Pattern Baldness

The advanced stages of male pattern baldness are practically never found in women, there may be extensive thinning, but rarely true baldness per se. This thinning is also conditioned by hereditary factors. Beginning at a later age than men, the course is irreversible but with an incomplete loss of hair. The mechanism and pathology is similar to male pattern baldness; that is, there is an underproduction of hair rather than an increased shedding, resulting from a sclerosis of individual hair follicles, which reduces them to insignificant elements.

The best thing that could happen to women since Madame Pompadour, is a revival of the wig, but hair dresser lobbyists will undoubtedly attribute all female frailties to these creations, and hair transplants will be attempted only on the bravest.

An impressively simple office procedure requiring only a skin biopsy punch, and local anesthesia has been developed by Dr. Norman Orentreich, of the New York University Medical Center, to redistribute to the bald spots small patches of hair from the posterior scalp, where hair usually persists long after the top is shiny. Small grafts, 3.5 mm. in diameter are so spaced on the recipient areas that as the hair grows it can be combed to cover the surrounding denuded scalp.

Dr. Jerome Kirschbaum* states that, "less than one percent of the grafts performed on patients with common baldness failed to take. The superficial crust that covers the graft falls off within seven to ten days, and new growth is usually noted within eight to ten weeks. The transplants after a few months produce normal tufts of hair which conceal the patient's baldness, and if the donor site becomes bald, then the recipient site will also become bald."

This procedure has not been universally accepted by dermatologists. The emotionally stable person, I am quite sure, would have no need to submit to this procedure. However, it will appeal to the insecure, disturbed or neurotic individual who must exhibit a "front."

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*Personal Communication.

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NEW CONCEPTS IN ACUTE MYELOMENINGOCELE CARE IN THE NEWBORN

Pierre L. LeRoy, M.D.

Myelomeningoceles are no longer considered hopeless. Therapeutic advances in the past decade have prompted a re-examination of the basic concepts of myelomeningocele care. Because of major strides in neurosurgery, antibiotics, and the development of a pediatric team concept, significant new gains can be anticipated.

At one time, myelomeningoceles were thought to be lymphatic tumors, and they were treated by compression. Today we know the myelomeningocele to be an abnormal development of the spinal cord, its coverings, its supporting soft and osseous tissue. The result of these abnormalities is a varying degree of neuromuscular deficit.

The incidence of myelomeningoceles is estimated to occur at less than 1 per thousand births.[1] In smaller hospitals, with a yearly birth rate below 1,000, the problem will be infrequent; the magnitude greater.

The etiology of myeloschisis is still uncercertain.

The pathogenesis is still uncertain, but the following facts are known:

1. The neural tube closes by the fifth week.
2. The chorioid plexus secretes embryonal spinal fluid at the sixth week.

Gardner[2] feels that impairment of the hydrodynamics causing over-distension of the neural tube results in distortion of the encompassing sclerotomes which then produces abnormal surrounding bone structure. If the degree of over-distention is mild, hydromyelia occurs in the infant, and syringomyelia may develop in the adult. If the condition is more severe, the neural tube will split, a double cord will result, according to this theory. This is known as diastematomyelia. Matson[3] feels that diastematomyelia is due to a mesenchymal rest. In the next degree of severity, Gardner feels, the over-distension results in external rupture of the neural tube into the amniotic sac, which progresses to myelomeningocele at the time of birth. Doctor Gardner's theory is not universally accepted, but seems to point the direction for further study.

The diagnosis is made visually. These midline defects of the back may occur at any level, but are usually lumbar. Their form varies from flat rachischisis to a pedunculated sac. Their sizes vary from several centimeters to massive dysplasias occupying 30 per cent or more of the dorsal surface. The sac is formed by a translucent membrane interconnecting the hypogenetic surrounding skin and the neural elements. Formed nerve elements are frequently seen in the acute stage. Occasionally a frank leaking or oozing of cerebrospinal fluid is noted. More often, the membrane is moistened by a transudate. Sometimes an occult myelomeningocele may occur in the thoracic or abdominal cavities, but this is very rare.

The reason that these myelomeningoceles are no longer hopeless is because of early and definitive treatment. What are these new concepts in the treatment of newborns with this problem?

1. Immediate sterile care of the sac.
2. Placement of the infant in an isolette to help reduce exogeneous infection.
3. Administration of bacteriocidal antibiotics, e. g., penicillin and streptomycin

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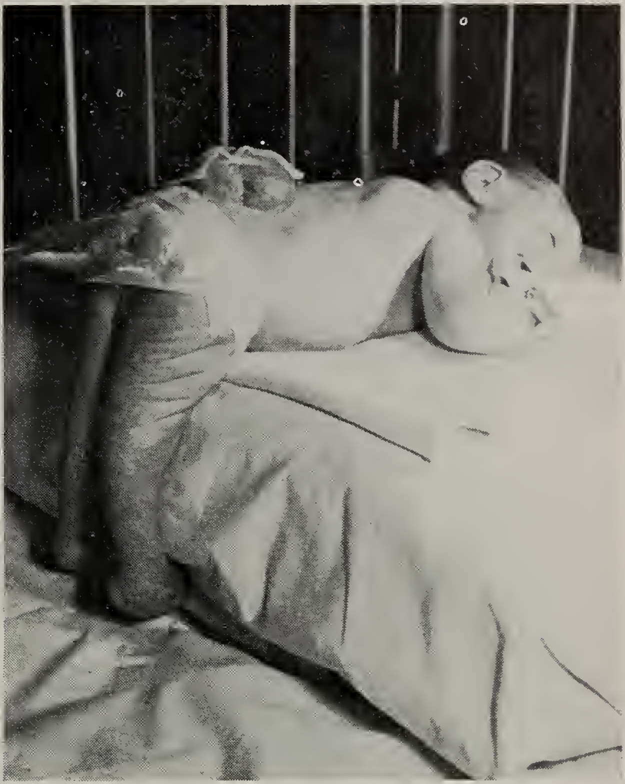
on the assumption that the infants are all subclinically infected.

4. Excellence in nursing care. This includes strict asepsis of handling the sac and protection with Telfa dressing; the use of myelomeningocele apron (see picture); the proper positioning of infant to prevent stool from contaminating sac; the use of the chemical debridement drips to cleanse the sac; e.g., Varidase.
5. Emergency neurosurgical repair. This consists of closure of the defect for prevention of further infection, and plastic reconstruction of the protective canal which holds the nerve roots. As a consequence, this socially unacceptable defect is removed.
6. The combined effort of urologists and orthopedists to prevent progressive chronic urinary tract disturbance, and osseous and articular malformation.
7. Active, long-term follow-up at regular intervals.

This congenital malformation is often associated with other congenital anomalies of the central nervous system as well as other systems. This primary defect usually takes precedence in its correction because of its serious, probable complications. But, in cases of rapidly progressing concomitant hydrocephalus, the pressures within the myelomeningocele sac must be controlled by early ventricular decompression. In the newborn, myelomingocele with paraplegias is no longer considered an absolute contraindication to early surgery since delayed movement may occur.

Follow-up results show the incidence of meningitis and wound infection has been materially reduced when aseptic technique is insisted upon. Long-term and careful management by the urologists for chronic urinary tract infection is required because of the associated neurogenic bladder, urinary stosis, and frequent development of hydroureters and hydronephrosis.

Osseous malformation requires early orthopedic correction and prolonged serial examinations to prepare for weight bearing.



This picture demonstrates: (1) proper positioning of the infant for gravity stool drainage to prevent contamination of the lumbar myelomeningocele; (2) the plastic myelomeningocele apron is in place to deflect the fecal stream; (3) note the Telfa dressing kept moist to mechanically protect and hold the chemical debriding agents; (4) the right angle position is forced by bilaterally displaced hips.

Summary

1. The acute myelomeningocele in the newborn should be diagnosed at birth by visual diagnosis.
2. It should be protected immediately from mechanical harm.
3. Early administration of bacteriocidal antibiotics is desirable.
4. Prompt and definitive neurosurgical management materialy helps reduce morbidity and mortality.

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USE OF WHITE MINERAL OIL IN RETENTION AND EVACUANT ENEMAS

• Recommended Techniques for Fecal Impaction, Dyschezia, Chronic Constipation, and Preparation for Proctoscopy or Roentgenography.

FREDERIC DAMRAU, M.D.

Present Study

Enemas have been used in order to lubricate and break up or shorten the long tenuous strands of fecal matter which make it impossible or difficult for the patient to be comfortable at stool. Use of the evacuant enema is a standard hospital procedure. It is employed routinely before operations and also in the treatment of fecal impactions, tympanites of typhoid and other infections, gaseous distention of the intestines, and constipation in bed patients.

In an attempt to overcome some of the disadvantages of the soap and water enema, this investigation was designed to determine the value and recommended techniques for use of white mineral oil* as an enema. The project involved determination of the methods most suitable for clearing the rectum and a portion of the descending colon.

History

Enemas have been in general use since the dawn of recorded history. The cuneiform inscriptions on Babylonian and Assyrian tablets (600 B.C.) illustrate their application.[1] Celsus (25 B.C.-50 A.D.) gave an exact description as to when and how to administer an enema.[2]

The soapsuds enema is commonly used in hospitals. Yet excessive soap is a decided irritant and may cause irritation and congestion of the mucous membrane of the colon.[3] Ulcerations and occult bood in the stool have been reported after soapsuds enemas.[4]

Scybala and fecal impactions must be softened to provide effective and comfortable evacuation of the colon. Olive oil is commonly employed for this purpose but its solvent action is poor and it is less effective than water.[5]

Action Of White Mineral Oil

The action of white mineral oil (heavy liquid petrolatum U.S.P.) in lubricating the intestines and softening hard fecal masses suggested its use in the form of an enema. However, in my survey of medical literature I was able to find only three references to this use.

The *United States Dispensatory* reports that, in cases of fecal impaction, 30-90 cc. of warm liquid petrolatum instilled at bedtime often softens the hard mass sufficiently for a cleansing enema of tap water to wash the mass out of the lower intestine the following morning.[6]

Bastedo made a single reference to the use of liquid petrolatum as an enema to soften and disintegrate lumpy or impacted feces.[3]

Dresen and Kratzer recommended mineral oil instillations and enemas for fecal impactions located in the sigmoid or higher.[7]

As compared with purgatives and cathartics white mineral oil is one of the mildest aids to elimination. Its action depends on the simple mechanical response to the stimulus of lubrication and bulk. White mineral oil has the following advantages: It is not habit forming,

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The material used in this study was Kaydol White Mineral Oil U.S.P. and Heavy supplied by Sommeborn Chemical and Refining Company, 300 Park Avenue South, New York, N. Y.

does not cause dehydration, does not remove mucus, does not cause griping, and is nontoxic and nonabsorbable.[8]

Clinical Procedure

Group 1—This group consisted of patients suffering from atonic constipation who did not respond to dietary control or laxatives and required occasional help from enemas. It was decided to administer to these patients enemas consisting of warm water soapsuds and white mineral oil.

Group 2—This group consisted of patients suffering from fecal impaction or dyschezia resulting from constipation induced by medication as well as fortuitous causes. They required enemas in order to break up fecal matter which had become difficult to remove at stool. It was decided to administer to some of these patients straight oil enemas and to some others an emulsion consisting of warm water, soapsuds and white mineral oil.

Group 3—This group consisted of patients who required rectal examination. This was for the purpose of proctoscopic or sigmoidoscopic inspection or x-ray visualization.

Clinical Results

Dyschezia—In those cases where difficult defecation resulted in constipation, the enemas were administered in the form of an emulsion consisting of warm water, soapsuds and white mineral oil.

In order to determine the most satisfactory amount of white mineral oil which can be emulsified with the least amount of soap, the amount of mineral oil was varied from 2 oz. to 8 oz. per quart of water, employing 1 gram (one level teaspoonful) of mild soap granules. In general, the most satisfactory enema was made by dissolving one gram (one level teaspoonful) of mild soap granules in one quart of warm water and adding to it 2 oz. of white mineral oil.

Impaction—2 oz. of straight white mineral oil were administered by rectal bulb. It was found that straight oil enemas are more effective in cases of fecal impaction than oil emulsion enemas as described above, though it is recommended that a single straight oil enema be administered and subsequent evacuant enemas should be given consisting of warm water, mild soapsuds and mineral oil. This procedure gave satisfactory results without strain or griping. However, there was a general complaint of some leakage and utilizing the straight mineral oil in combination with an alginate solution was attempted but the results were no more sataisfactory with respect to leakage. Such leakage possibly could be avoided by the use of a smaller amount of straight white mineral oil, although the full 2 oz. gave most favorable results.

Atonic Constipation—In these cases constipation was primarily due to difficulty at stool and consequent avoidance of regular sittings. Enemas consisting of white oil emulsions as described above were administered. These oil emulsion enemas were entirely comfortable and gave more satisfactory results as compared to the conventional soap water enemas. With the use of oil emulsion enemas there were no complaints of cramps, griping, or irritation and congestion of the mucous membrane of the colon. The greatest number of cases where the use of an enema is indicated fall in this category.

Roentgenography and Proctoscopy—Patients falling under Group 3 were treated with the oil emulsion enema as described above. Complete evacuation occurred preparatory to rectal examination by proctoscopy or roentgenography. The small amount of soap in the enema, when combined with white mineral oil, produced no irritation or discomfort. Increasing the amount of white mineral oil above 2 oz. did not affect the degree of residual fecal content left in the bowel. In fact, as stated above, complete evacuation resulted from an oil emulsion consisting of 1 quart of warm water, 1 gram of mild soap and 2 oz. of white mineral oil.

Summary

1. The soapsuds enema commonly used in hospitals can be improved greatly by reducing the amount of soap and adding suitable amounts of white mineral oil. In this way scybala and fecal impactions can be softened

(Continued on Page 21)

PROCEEDINGS OF THE HOUSE OF DELEGATES

MEDICAL SOCIETY OF DELAWARE

PART II

The President: We will now hear the report of the AMA Education and Research Foundation Committee.

REPORT OF THE COMMITTEE OF THE AMA-ERF

I submit the following report for the Delaware State Committee of the American Medical Association Education and Research Foundation.

The past calendar year has shown an increase in the participation of Delaware physicians in the American Medical Association Education and Research Foundation. This increase amounted to 60% over the preceding year. We will apparently attain a similar level in contributions again this year.

Our committee would like to thank our fellow physicians for their continuing financial support in the AMA-ERF program.

Respectfully submitted,
JOSEPH M. BARSKY, JR., M.D., Chairman

The report was accepted.

The President: Now the report of the Grievance Board.

REPORT OF THE GRIEVANCE COMMITTEE

As no matters were referred to the Committee during the past year, there is no report.

Respectfully submitted,
LAURENCE L. FITCHETT, M.D., Chairman

The report was accepted.

The President: Next is Maternal and Infant Mortality, Dr. Esterly and Dr. Hassler.

REPORT OF THE COMMITTEE ON MATERNAL AND INFANT MORTALITY

During the year 1962, there were 11,383 live births. There were two maternal deaths, giving a 17 maternal deaths per thousand deliveries.

Both of these deaths were due to intra cranial vascular accidents. The first was due to a subdural hematoma left. This patient had a normal delivery following a four hour labor.

The subdural hematoma was chronic in nature and not associated with the pregnancy or delivery.

The second death was due to rupture of congenital aneurysm of the circle of Willis. The patient was twenty-eight weeks pregnant at the time of the vascular accident and the fetus expired in utero.

We have been fortunate in having only two maternal deaths, both being unrelated to the maternal care and management.

We must continue to give the best care possible to the pregnant patient, and remain ever alert to the dangers of infection, hemorrhage, and toxemia, and the ever present possibility of aspiration during obstetric anesthesia

Respectfully submitted,
F. S. HASSLER, M.D., Chairman

Report On Infant Mortality

The report of the Committee on Infant Mortality is the study of all neonatal deaths in the State of Delaware during the year 1962.

Study Sources

As in past years, the information was obtained from the hospital records by means of a form completed by the doctor responsible for the care of the baby When it was not possible for the doctor to fulfill this request, the medical record librarians or a member of the committee supplied the data by examining the charts. The data is compiled in Tables I and II.

Discussion

Since changes in death rates for the various hospitals are difficult to evaluate from one year to the next, the overall trend of the state seems to be of more significance. In 1954, when this committee began to study infant mortality, the neonatal death rate (deaths per 1000 live births) in the U.S.A. was 19.1 and has steadily dropped to a rate of 18.6 for the past three years. The State of Delaware started at 20.6 in 1954 and has also had a constant decline, but at an accelerated rate. The rate for the past three years combined being 17.1. No cause for this decrease in fetal wastage is evident, but we hopefully feel that more carefull scrutiny of one's own techniques through hospital meetings and discussions may be contributory to better care.

TABLE I

	Delaware	Wilmington General	Memorial	St. Francis	Riverside	Kent General	Milford Memorial	Beebe	Nanticoke	USAF Hosp.	Home	Total
Total Live Births 1962	2566	1985	2044	699	216	1058	1013	379	640	683	100	11,383
Deaths in 1st 28 Days	32	31	35	8	3	20	21	7	7	13	2	179
Corrected Deaths in 1st 28 Days	26	32	34	8	6	20	20	7	7	13	3	176
*Rate-1st 28 Days	10.1	16.1	16.6	11.5	27.8	18.9	19.8	18.5	10.9	19.0	30.0	15.5
Deaths in 1st 7 Days	24	27	30	7	6	17	17	7	7	13	2	157
Rate—1st 7 Days	9.4	13.6	14.7	11.5	27.8	16.1	16.8	18.5	10.9	19.0	20	13.8
Deaths in 1st 24 Hours	10	21	22	4	4	10	8	4	6	7	0	96
Rate—1st 24 Hours	3.9	10.6	10.8	5.7	18.5	9.5	7.9	10.6	9.4	10.3	0	8.5
Deaths in 1st 7 Days Weight over 1000 gms.	18	17	13	5	4	13	14	6	4	10	2	104
Rate—1st 7 Days Weight over 1000 gms.	7.0	8.6	6.35	7.15	18.5	12.3	13.8	15.8	6.3	14.6	20	9.1
% Deaths Previable (500-1000 gms.)	23.1	37.5	53.0	37.5	33.3	20	20	14.3	42.8	15.4	0	31.2
% Deaths Viable Prematures (1000-2500 gms.)	50	43.7	20.6	62.5	66.7	50	50	85.7	57.2	38.4	66.7	45.5
% Deaths F.T.	26.9	18.8	26.4	0	0	30	30	0	0	46.2	33.3	23.3

*Rate=Deaths/1000 Live Births

Corrections:

3 Transferrel from Elkton, Md., to Delaware Hospital
2 Transferred from Riverside Hospital to Delaware Hospital
1 Transferred from Riverside Hospital to Memorial Hospital
1 Born at Wilmington General Hospital and DOA at Delaware Hospital
1 Delivered at home by mid wife and transferred to Milford Memorial Hospital

TABLE II

Cause of Death	Delaware	Wilmington General	Memorial	St. Francis	Riverside	Kent General	Milford Memorial	Beebe	Nanticoke	USAF Hosp. Dover	Home	Total	Percent
Undetermined	8	15	11	4	2	7	7	2	5	2	1	64	36.4
Hyaline Membrane	5	3	4	1	1	3	1			2		20	11.4
Congenital Anomalies	7	8	7	1	1	6	5	2		3	1	41	23.3
Intrauterine Anoxia	2	3	8	2	1	1			2	1		20	11.4
Intracranial Hemorrhage	1	1	1			2	4	3		3		15	8.5
Erythroblastosis Fetalis			1							2		3	1.65
Broncho Pneumonia	1		1		1	1	3				1	8	4.6
Intrapulmonary Hemorrhage	1		1									2	1.1
Intussusception	1											1	0.55
Meningitis		1										1	0.55
Congenital Syphilis		1										1	0.55
Total	26	32	34	8	6	20	20	7	7	13	3	176	100
% Autopsied	64.5	48.5	60	37.5	33.3	60	57.2	71.5	28.6	84.5	33.3	58.1	
% Undetermined	30.8	46.9	32.3	50	33.3	35	35	28.8	71.5	15.4	33.3	38.6	

The high death rate last year due to erythoblastosis fetalis has returned to the usual level of 2-3% and none of these deaths could have been prevented.

The disturbing figure in the recent data is the rise in the number of deaths due to congenital anomalies during the past three years. In 1962, 23.3% of the deaths occurring in the first 28 days of the life were due to defective fetal development. This compares to 21.2% and 19.7% in 1960 and 1961 respectively. Even after excluding the babies who died between 7 and 28 days of age, there are 33 of 157 deaths or 21% due to congenital abnormalities. During the period 1954 to 1959, when only the deaths in the first seven days of life were studied, the rate was consistently around 10%, which is about the same as the national average Part of this increase may be more apparent than real, since the autopsy percentage, rising from 29.2% in 1954 to 58.1% in 1962 may afford more accurate diagnoses. Nevertheless, some prenatal factors must play a role in the changing picture of neonatal mortality.

Respectfully submitted,

KATHERINE L. ESTERLY, M.D., Chairman

The report was accepted.

The President: We will pass on then to the next item, Medical Economics, Dr. Arminio.

REPORT OF THE COMMITTEE ON MEDICAL ECONOMICS

This year the Committee's primary interest was spent with the problem of how to implement a Keogh Act Retirement Program for members of the Medical Society of Delaware. Programs were outlined by The Professional Retirement Organization, Inc., The National Pension Planning Association, The Sert Plan 'Equity Retirement Plan and Trust,'' and The Potential Plan submitted by Mr. Lamar Watson after a survey and questionaire was completed by our membership. Similar individual plans were also considered by the members of the Medical Economics Committee. A detailed report by Mr. Watson was submitted to our Committee following the membership survey.

Throughout this period of time, the Committee realized that the American Medical Association was negotiating to write a similar plan. The American Medical Association, we are now informed, is definitely committeed to negotiate a nationwide plan before the end of 1963. The Medical Economics Committee recommends to the delegates that this plan, which the American Medical Association will write, be investigated. Our other suggestion would be that the American Medical Association plan be supplemented definitely with a local modification in order to obtain local counsel and planning. Our advice to our membership would be that the individual physican wait until late October or early November before taking action on the Keogh Bill.

Respectfully submitted,
JOSEPH A. ARMINIO, M.D., Chairman

The report was accepted.

The President: The next is Medical Scholarships, Dr. Lang.

REPORT OF THE COMMITTEE ON MEDICAL SCHOLARSHIPS

The Society's Scholarship this year was awarded to Mr. Clifford Calloway of Magnolia, Delaware, a graduate of the University of Delaware who will attend Northwestern University School of Medicine. Scholarship grants were renewed for Robert B. Brereton of Milford, Alphonso P. Ciarlo and John Tull of Wilmington, all of whom presented evidence of satisfactory performance from their respective Medical Schools.

It is of some concern that we reecived only two applications this year. This may well be a reflection of the sudden surge of available Scholarship and Loan Funds for medical students. Perhaps we need more publicity locally and this might be carried out most appropriately by the individual members of this Society.

Respectfully submitted,
LEONARD P. LANG, M.D., Chairman

The report was accepted.

The President: The next report is Medical Service and Public Relations by Dr. Morris.

REPORT OF THE COMMITTEE ON MEDICAL SERVICE AND PUBLIC RELATIONS

A. The committee studied the report of the American Psychiatric Association which followed that organization's study of mental health facilities in Delaware. The committee then met with Drs. Albert Ingram, Charles Strahan and James Flaherty to learn the attitude of the psychiatrists about the report. The committee then drafted a resolution which was subsequently adopted by the Council of this Society, suggesting, among other things, the appointment of at least one psychiatrist not in the employ of the State Hospital System to the Board of Trustees of the State Hospital.

B. With the newly acquired help of Mrs. Westfall, approximately twenty-five medical columns have been put into final form for printing in the weekly newspapers of the state. To date only one such weekly newspaper has been offered this service; that newspaper has elected to use our column.

C. The committee discussed and studied the advisability of sponsorship by this Society of a mass polio immunization project with Sabin vaccine. The problem was explored with Dr. Gliwa of the

Public Health Service and a recommendation, subsequently adopted by the Council of this society, was made to sponsor such a program this autumn and winter.

D. One member of the committee spoke at a career-day program at Mt. Pleasant High School. This action would appear to show promise of preventing a doctor shortage in 1977.

E. Two members of the committee met with Mr. Henry Davidson, a reporter for the News-Journal Papers, in an attempt to provide for him background material for a proposed article or series of articles on the general subject, Changing Modes of Medical Practice.

F. One member of the committee, Dr. Alfred Bacon participated in a panel sponsored by the Delaware-Maryland Press Association at Washington College, Chestertown, Maryland, in June.

G. The committee is interested in a program of the Wicomico County Medical Society, at Salisbury, Maryland, which consists of a local television series which enjoys considerable local popularity.

Respectfully submitted,
ALLSTON J. MORRIS, M.D., Chairman

The report was accepted.

The President: Next is the report of the Medical School, Dr. Marvil.

REPORT OF THE COMMITTEE, MEDICAL SCHOOL FOR DELAWARE

In 1963 we have been successful in obtaining support for a feasibility study for a Medical School for Delaware.

Representatives of a large drug company foundation with an advisor from the University of Pennsylvania Medical School came to Wilmington last November and met with our committee. Both the drug company foundation and the University of Pennsylvania representative were interested in helping with the survey.

The University of Delaware joined with the Medical Society of Delaware in requesting the Academy of Medicine to have a survey done. The Medical Society of Delaware's half of the cost of the survey was donated by an interested Delawarean.

Dr. Kenneth E. Penrod, Vice President for Medical Affairs for the University of West Virginia, with a consulting staff of five leading medical educators is now conducting the survey. Dr. Allston J. Morris and his committee are to be commended for selecting such an able group.

Last published figures listed Delaware as 15% below United States average in physicians. Since then our physicians, licensed, have increased, our population has also increased, we are in the second fastest growing United States area. Mid 1963 vital statistics listed 475,000 persons in Delaware. An increase in the vicinity of 30,000 per year would give an estimate of 485,000 persons at the end of October.

New figures received three days ago show 132.4 licensed physicians per 100,000 population in the United States. At this rate we should have 641 licensed physicians in Delaware including armed forces.

"Datagrams," publication of the Association of American Medical Colleges says, "The critical indication is the decreasing ratio of U.S. medical school graduates to population since 1955—and this despite a 2.7% increase over the same period in their actual numbers. Although an eight year time span (1955-62) is insufficient to establish a firm trend, the decreasing ratio of U.S. medical school graduates to total population and its implication for future medical care is of utmost importance."

Our interest in a medical school has marked us as a progressive state. A forensic pathology laboratory on an extensive scale is now being considered on the possibility of a 2 year medical school here. We have attracted many physicians from less active communities because of the publicity which has accompanied our efforts in trying to see if we can have a medical school. Delaware taxes help furnish Federal funds which could return a substantial impact economically with construction, jobs, services and added prestige to our state.

With the U.S. Government being willing to pay two-thirds the cost of construction, 40% of maintenance of medical schools, besides many fringe benefits such as $2,000 scholarships for students, how can we fail to try to succeed? The future is unlimited if we will speak up.

I am certain that Dr. Penrod and his group will consider all information available and that he will render a fair decision.

Respectfully submitted,
JAMES E. MARVIL, M.D., Chairman

The report was accepted.

The President: Next we have the Medicare Adjudication, Dr. Dobson.

REPORT OF THE COMMITTEE ON MEDICARE ADJUDICATION

Your committee has been asked to adjudicate only one claim from a member of our society regarding the fee for service to Medicare dependents.

This claim was settled without the necessity of a meeting of the committee.

Respectfully submitted,
L. M. DOBSON, M.D., Chairman

The report was accepted.

The President: Next, Medico-Legal Affairs, Dr. Metzger.

REPORT OF THE MEDICO-LEGAL COMMITTEE

The Medico-Legal Committee has been concerned primarily with the function of the malpractice screening panel and four cases have been heard. None of these resulted in an open trail involving any of our members, and it has been the general feeling of the Bar Association, as well as of the Society, that this is proving to be a very effective instrument.

The membership is to be highly commended for the generous and responsible way it has served on the panels, and their thoroughness, impartiality and secrecy has been noteworthy. It would appear as well that the Society should make a formal expression of thanks to the members of the Delaware Bar for their equally effective participation.

As the mechanics of the plan become more firmly established, it is hoped that time will again permit the preparation and execution of an open medico-legal meeting, such as those that have been held in the past.

Respectfully submitted,
JAMES T. METZGER, M.D., Chairman

The report was accepted.

The President: Next is the Committee report on Prepayment, Dr. L. C. McGee.

REPORT OF THE COMMITTEE ON PREPAYMENT

Much of the time of this committee during the past year was spent on the following subjects:

1. Negotiations with the Delaware Group Hospital Service regarding the potentials of "service-type" contracts and their proper control in the best interest of all parties concerned.
2. Discussion of types of contracts sought by General Motors Corporation and the United Auto Workers.
3. Fee schedule and scope of benefits for the OAA extension of medical care under the provisions of the Kerr-Mills Act.
4. Conferences with representatives of the National Association of Blue Shield Plans and of the A.M.A. regarding the basis required in Delaware in order to consider the payment-in-full principle for coverage of persons over 65 with limited incomes and modest resources.

Summary of Minutes from Meetings of the Committee

August 23, 1962

The Committee met with Mr. Joseph Toomey of J. J. Pearce, Trustees for ten Delaware Union-Management Welfare funds, and Mr. Robert Lloyd of J. T. Ward, contractors. The background of this Committee's studies and its reasons for being were explained to Mr. Lloyd and Mr. Toomey. Mr. Lloyd and Mr. Toomey discussed the Welfare Funds of their organizations.

Mr. Toomey recommended asking Mr. Pearce and the Trustees of one or more welfare funds to meet with the Committee.

A letter was preesnted from Mr. J. Sellers Bancroft, newly elected president of the Board of Group Hospital Service. Mr. Morris had asked on behalf of the Society that one or two representatives of the Prepayment Committee be given the privilege of appearing before th GHS Board to discuss the Society's position on the Senior Citizen's contract. Mr. Bancroft had replied that he considered such representation the function of the medical members of the Board, and that "your proposal at this particular time is impracticable for us to accept." In view of this, it was decided that the next meeting of the Committee was to be arranged with the medical members of the GHS Board.

October 22, 1962

The Committee met with the Sub-Committee of the Blue Shield Board to discuss conditions for a Service Contract for the Aged. It was recommended that "a resolution be placed in the minutes of the Blue Shield Board to the effect that it is the intention of the Board to follow the recommendations of the Medical Service Benefit Committee in the absence of compelling reasons to the contrary."

December 4, 1962

The Committee gave considerable attention to a report from the Executive Secretary, Mr. Lawrence C. Morris, Jr., on the operation of the Blue Shield Service Contract in Michigan known as the M-75 Program.

A discussion was held regarding approval of the Council of an amendment to the Blue Shield By-Laws which would provide for a medical service benefit committee to be composed of five physicians and five laymen. This committee would have the duty of supervising service contracts. The Council had approved this arrangement with the proviso that the Blue Shield Board accept a resolution putting it on record within its own minutes as being willing to accept the recommendations of the medical service benefit committee in the absence of compelling reasons to the contrary. The Society has been notified that the Executive Committee of Blue Shield disapproves the resolution, and will recommend against its passage.

January 17, 1963

The minutes of this meeting include a position statement prepared by the Prepayment Committee, Medical Society of Delaware, as a report and recommendations to the Council of the Society and other interested parties.

"In negotiating a basis for service contracts, the Medical Society of Delaware has no intention whatsoever of exerting influence on the existing programs and policies of Group Hospital Service, nor of undermining any of the existing prerogatives of its Board of Trustees. These existing prerogatives, however, do not include the right to specify the charges of any participating physician. The addition of one or more service programs to Group Hospital's offerings would confer this right upon the Board unless some method can be agreed upon to provide physicians with an opportunity to exercise some effective control over the conditions and compensation for which their services are sold. Failing this, no service program can exist in Delaware without medical practitioners' being required to place the conditions of their service in the hands of a Board, which, however good its intention and motivation, is predominantly untrained in medicine, and without experience in its practice.

"We are aware that the National Association of Blue Shield Plans and the American Medical Association have expended considerable time and effort during 1962 and early 1963 to implement the 65-National program on a nation-wide service basis. It is our understanding that this policy has been dictated by the assessment of Blue Shield's position as articulated in the Fall of 1962 by Dr. Donald Stubbs, that the continued effectiveness of the Blue Shield movement is dependent upon the extension of the service concept where it is not now in effect and the development of a practical mechanism for the sale and service of Blue Shield programs to national accounts.

"We have tried sincerely and in good faith to negotiate a reasonable basis for the implementation of the 65-National program on a service basis in the state of Delaware, where no Blue Shield service program has ever existed. It does not appear, however, that the Council of the Medical Society of Delaware will be able to recommend participation in this program to the membership. However, for the record, and so that our position may be clearly understood, we wish to provide you with a summary of negotiations between ourselves and Group Hospital Service, which appear at this time to hold little hope of providing a basis for the implementation of any Blue Shield program in this state.

"As you know, Blue Shield has been entirely on an indemnity basis in this state since its founding. Blue Cross and Blue Shield are operated by a single Board of Trustees, on which six of nineteen seats are held by physicians. This minority control has presented no insurmountable problem in the past, so long as indemnity programs only were involved. Its existence, however, is essential to an understanding of our position regarding service programs.

"The 65-National program was announced in late January, 1962. Because of this program, and because of other indications of a desire for a service program in this state, the Society began, in the early spring, an intensive study of ways and means by which the physicians of the state could offer service programs while retaining reasonable control of the conditions under which their services were to be offered and over the compensation for the services to be rendered. Paramount in this study was a rcognition that Blue Shield and Blue Cross ought not to be divided for reasons of relations with the insurance commissioner, existing reserve allocations, minimizing of administrative cost, and others, not the least of which was the perfectly natural reluctance of Group Hospital Service to divide its functions.

"The study was conducted from a number of premises, of which the following were particularly significant.

"a. That the Medical Society of Delaware should try in all sincerity and good afith to work out a system under which service could be provided in this state in a manner satisfactory to everyone concerned.

"b. That the Board of Blue Cross and Blue Shield ought not to be separated, if this can reasonably be avoided.

"c. That the Board of Trustees of Group Hospital Service, being ultimately responsible for the conduct of the corporation's affairs, must have ultimate authority in these affairs.

"d. That the physicians seek no control of Blue Cross beyond the existing minority representation on a consolidated Blue Cross-Blue Shield Board.

"e. That a service contract constitutes, in effect, an offer to sell services of participating physicians at a pre-determined price to any eligible subscriber, under conditions prescribed by the Board of Trustees.

"f. That the Medical Society of Delaware has no ethical duty, and perhaps no ethical right, to urge its members to place the disposal of their services in the hands of a Board of Trustees which, however good its character and motivation, is predominantly untrained in medicine and without experience in its practice.

"g. That while implementation of a 65-national program is desirable, it does not differ in principle from any other service program, so that any mechanism used to govern it should be capable of governoring service programs generally, if and when additional programs should seem desirable.

"After several month's serious study, the Committee recommended to the House of Delegates, September, 1962, that the Executive Council be given authority to negotiate with Group Hospital Service toward an implementation of the 65- national program, and that, should the Council find it possible to arrive at an agreement within certain basic principles, it be empowered to approve the program in the name of the House of Delegates. The House granted this authority to the Council, which has, since that time, been negotiating in the name of the Society.

"In an effort to resolve the difficulty of minority representation, a sub-committee from the Medical Society met with a sub-committee of the Board of Trustees of Group Hospital Service to draft an amendment to GHS's By-Laws creating a medical service benefit committee. The proposed amendment is enclosed for your information. We consider it significant that there is no provision for control of the service program by physicians, but rather, physicians are given an equal voice in the management of service programs, subject to the ultimate authority of the Board of Trustees. Such equal representation as is given is limited specifically to service contracts. The functions of the Committee are spelled out in some detail, but nowhere is any specific authority conferred upon it which would indicate what significance its recommendations might have.

"The amendment to create a medical service benefit committee was submitted to the Council with the details of the 65-national program and the following materials submitted by Group Hospital Service: A proposed fee schedule for the 65-national program; a draft 65-national senior citizen certificate for subscribers; a draft surgical-medical service benefit endorsement for subscribers; a draft service benefit endorsement letter of agreement for participating physicians.

"The Council approved the proposed fee schedule without change.

"The Council approved the draft 65-national senior citizen certificate for subscribers with two changes—one corrected an error in fact, and the other changed the words, "the corporation may make payment direct to the participating physician.' to ". . . shall made payment . . ."

"The Council approved the draft of the surgical medical service benefit endorsement for subscribers, with one change. This was the addition of a paragraph to the effect that purchase by or on behalf of a hospitalized patient of services not ordinarily available at the semi-private rate and not medically indicated would invalidate the physician's obligation to accept Blue Shield's schedule as full payment.

"The Council approved the service benefit endorsement letter of agreement for participating physicians with three changes. The first asked that the letter, which had indicated that fees would be the professional services index as multiplied by a nationally-determined conversion factor, be rewarded to make the conversion factor a locally determined one. The second change asked that the Plan's stated intention of conveying the subscriber's stated eligibility for service benefits to the participating physician via the membership card be written into the letter for clarification. Finally, the Counil asked that a paragraph be added to indicate that the fees be recognized as below normal for this area, and that they cannot be considered extensible to other programs nor used with validity as precedent in the rating of other programs.

"We have not been notified that any of these changes are considered unacceptable by Group Hospital Service.

"Finally, the Council approved the amendment creating a medical service benefit committee, in the form in which it is attached, which is as the two sub-committees had agreed. There had, however, been discussion at the sub-committee level of a resolution placing the Board of Group Hospital Service on record in its own minutes as being willing to accept the recommendations of the medical service benefit committee in the absence of compelling reasons to the contrary. Such a resolution was thought desirable by the Medical Society representatives in view of the fact that no authority for the committee is given in the amendment itself, and as a guide to future Boards concerning the spirit of its adoption. Further, since the definition of 'compelling reasons' lies in the hands of the Board of Trustees, such a resolution would constitute nothing more than an affirmation of good faith, which the Medical Society's Council was willing to accept.

"It is the unanimous belief of the Medical Society's representatives on the sub-committee that such a resolution had been found acceptable by GHS's representatives. The approval of the

Council was contingent upon the acceptance of such a resolution.

"These approvals were transmitted to GHS. Shortly thereafter, the Society was notified by Mr. H. V. Maybee, Managing Director of Group Hospital Service, that 'The Executive Committee asks me to inform you that it is unanimously opposed to the adoption of such a resolution and will so recommend to the Board of Trustees if such is proposed at our meeting on November 26.' "The letter gave no reason for this position.

"In view of this attitude, the Society, in a further effort to make possible the implementation of the 65-national program, withdrew the resolution in spite of its understanding of prior approval at the sub-committee level, and resubmitted the amendment with this paragraph added:

> 'While no modification, expansion or addition to a service contract can be made except by the Board of Trustees, any such proposal shall be referred to the medical service benefit committee, and the Board may not take action until the modification has been approved by the committee.'

"The Council was, of course, aware that this was no stronger than a simple expression of good faith would have been, but felt that it was desirable in view of the Board of Trustees' unwillingness to make such an expression of good faith.

"In answer to this proposal, the Society was informed that 'the members of the (Executive) Committee were unanimous in the expression of their opinion that the proposed addition to the amendment was unacceptable because of the restrictions that it would impose on the Plan Board . . . In any event, this proposed addition to the By-Laws will not be submitted to the Board of Directors for a vote.'

"The Medical Society, in another effort to clear the way for implementation of the 65-national program, then asked for a reconvening of the joint sub-committee to consider how this impasse could be worked out. The following answer was received: 'from the standpoint of Mr. Bancroft (president of the Board of Trustees), no purpose will be served by holding another meeting to discuss this particular point in relation to the By-Law amendment.'

"In view of the refusal of the Executive Committee of Group Hospital Service to submit the Society's proposals to the Board as a whole for its vote, the Society then arranged to have them introduced by an individual member of the Board."

March 14, 1963

This meeting dealt with discussion of recommended physicians' fees for home and office visits under the Kerr-Mills Bill, based on Delaware internists' and general practitioners' poll.

It was moved that the Committee recommend that there be at "this time three fees for Kerr-Mills patients, that these be for office calls, for house calls 8:00 a.m. to 8:00 p.m. and for house calls 8:00 p.m. to 8:00 a.m. It was further agreed that this proposal be given the Department of Public Welfare on a one-year basis only, with the thought that experience should be gained on the balance between home and office calls and on the volume involved. This experience, it was felt, would be valuable at a re-negotiation session in about one year.

It was then agreed that the following fees would be reasonable, representing approximate overhead, and recognizing the higher overhead value of a night call in the sense that night calls may involve an impairment of efficiency.

For an office call—$3
For a house call 8:00 a.m. to 8:00 p.m.—$5
For a night call, requested by the patient, and made between the hours of 8:00 p.m. and 8:00 a.m.—$7

Subsequent meetings and a visit from representatives of National Blue Shield and the A.M.A. gradually clarified the position of the Committee and that of the Board, Group Hospital Service, Inc.

At a meeting of the Committee, Group Hospitaal Service announced its intent to convert the existing Blue Shield indemnity schedule to a Professional Services Index.

September 13, 1963

A letter was received by the Chairman of the Committee summarizing the results of further discussion of the amendment to Article VIII of the By-Laws of Group Hospital Service which resulted in the following draft proposed by attorney, Max S. Bell, Jr.:

Contracts

> "The form and contents of the subscriber contracts and contracts with participating physicians shall be such as shall from time to time be determined by a resolution of the Board of Trustees; provided, however, that if any contracts involving paid-in-full provisions ('service contracts') are made by the Corporation, no provision shall be included in any such contract or any change made therein with respect to (1) physicians' fee schedules, (2) income limits for subscribers, or (3) physicians' services to be provided thereunder, until notice of the terms of such provision is first given to the Delaware State Medical Society and the Society, through its committee authorized to act for it

in this regard, either approves the provision or fails to advise the Corporation of its disapproval thereof within 30 days."

Respectfully submitted,
L. C. McGee, M.D., Chairman
R. D. Sanders, M.D., Co-Chairman

The report was accepted.

The President: The next is the Committee on School Health, Dr. Frelick.

REPORT OF THE COMMITTEE ON SCHOOL HEALTH

In the past year further ground work was laid for better functioning of this Committee.

As noted in the past, the Committee is not in a position to initiate any change in School Health Policy, but must work through the schools themselves and usually at their invitation. In line with this the Committee has been responsible for reactivating the State Health Advisory Council of the State Board of Education, which has on it representatives from each of the County Medical Societies as well as the Chairman of the School Health Committee of the State Medical Society. Up until last spring he has been the Chairman of the State Health Advisory Committee.

Thus it has been possible to make some progress. For example: after much committee work and passing recommendations back and forth between the Medical Society, the Athletic Commission, State Board of Education and the Advisory Health Council, it looks as if The State Board of Education is about to issue a firm recommendation that the present school policy for examining students engaged in interscholastic sports will be changed so that each athlete will have one examination during the school year, hopefully of good quality and done preferably by his own personal physician. This will satisfy the requirements for all sports that the student may participate in, unless he has an intervening illness or accident, in which case an interval examination will also be needed. A report of the examination is to be handed to the proper school officials prior to the sport season.

The State Board of Education has also, upon the recommendation of The State Advisory Health Council, made a formal suggestion to each chief school officer that he form a Health Advisory Council for his school district. This is to be composed of physicians, nurses, administrators, representatives of the physical education department, health educators, P.T.A., dentists and other interested personnel such as dieticians, who shall help formulate school health policies at a local level.

We now have four or five such health advisory councils functioning in the state and others in formation. We are anxious for physicians to participate when asked to serve on health advisory councils of their local school district. If any physician needs guidance to help his local health council he may borrow A.M.A. booklets covering the matter at the State Medical Society office.

The School Health Committee wishes to encourage full physician participation in this effort as many health matters need the guidance of local physicians. We know for example that the State Health Adivsory Council has suggested that individual districts should develop their own approach to sex education and V.D. control, since there are such different circumstances in each area.

The Chairman of the School Health Committee of The State Medical Society has been named to be on The State Physical Fitness Committee. This is a further manifestation of the awareness of the educators in the physicians' contribution and interest in school health. As immediate result we have had at least one publication in the Delaware Medical Journal on this problem. The School Health Committee has also been requested by the State Department's Committee on Teacher Accreditation to help develop a physical examination questionaire and form for better evaluation of new teachers prior to their being certified by the State Department of Education. This is now in process.

It has also been suggested that we institute some type conference for coaches and physicians. The Association for Health, Physical Education and Recreation of the State of Delaware has already approached the Academy of Medicine asking for help in this field. The School Health Committee has indicated its willingness to cooperate.

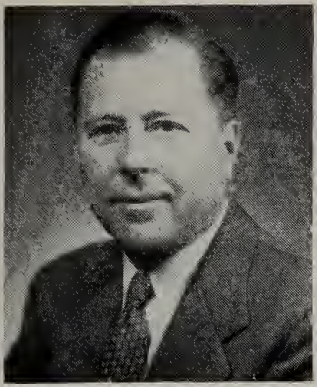
A new state T.B. testing program has also been evolved through the State Health Advisory Council. This has already been explained by separate communications sent to each physician.

The Committee hope, some of the above measures will be the beginning of more meaningful contact between physicians and the schools.

Respectfully submitted,
ROBERT W. FRELICK,. M.D., Chairman

The report was accepted.

Part III will appear in the February, 1964 issue. The complete report of the Proceedings of the House of Delegates is on file in the Medical Society office and is available to members for reference.



President's Page

1964, YEAR FOR ACTION

Medico-socio-political problems of tremendous significance will face all of us as physicians during this crucial year. The greatest additional service we can offer the American people is assistance to preserve the freedoms which all of us have revered throughout the history of this growing country. There are forces around us which would set the stage for restricting these long enjoyed freedoms. Reasonable men are willing to try reasonable changes which do not destroy basic liberties.

Medical doctors, not only as members of our State Society, but as individuals, must now prepare for the greatest effort ever expended to maintain basic freedom of action for all Americans. This involves not only freedom in matters of medical care but freedom of choice in all matters. Every doctor's participation will be required especially in Medical Society affairs. Officers and Committees cannot carry the burden alone. Each physician must resolve to attend Society meetings regularly. Learn what is to be done—then do it.

Floyd T. Hudson

Guest Editorial

THE OBSOLETE MENOPAUSE

Robert A. Wilson, M.D.

This article was reviewed by O. N. Stern, M.D., of Wilmington, who highly recommended the principles expressed. He did caution that the doses used under such a philosophy should be only a fraction of the usually accepted dose.

A girl becomes a woman when estrogen and progesterone arrive. When they depart, she is a woman by courtesy only—in reality a castrate, condemned by tradition and a mystique that surround this time of her life in an almost impenetrable cloak.

The favorable metabolic effects of estrogen and progesterone on every body cell are not fully realized. Estrogen improves cell permeability and regulates the supply of micronutrients, enzymes, glucose, minerals, water, etc.[1] Progesterone, while essentially catabolic, is definitely needed for balanced cell metabolism. Both are essential for homeostasis.

In the past, because the menopause happened to every woman, it was generally thought to be normal. So long as there was no remedy, this was a comforting, almost necessary idea. Today the effects of estrogen and progesterone deficiency are so completely documented that to list them would be repetitious. We know that menopausal women are not normal; they suffer from a deficiency disease with serious sequelae and need treatment.

The removal of the ovaries and uterus in women in the twenties and thirties is sometimes necessary, and denying them *full* hormonal replacement is the rule rather than the exception—a form of "medical barbarism." This is also true when the denial is in the forties or fifties, and even later. Although the insult decreases with age, every cell is adversely affected. If there is to be denial—a cutoff point—at what age is it to be? Who is to decide? On what research is it to be based?

When the thyroid weakens with age, replacement therapy, continued indefinitely, causes no concern; this applies to the pancreas and adrenals too. But when the gonads fail at the menopause, a different philosophy prevails—"Don't interfere with nature."

Precise diagnosis and treatment is the rule when ovarian failure occurs in the twenties or early thirties, yet after about age 35 this is seldom the case. Failure is attributed to early menopause and there is a loss of therapeutic interest. The patient is told to expect amelioration and preparation for future adjustment, but not cure.

About ten per cent of women maintain a high estrogen titer as late as age 60. One of these women visits her gynecologist. After examination plus an analysis of the vaginal smear, he compliments her on her perfect condition—her high estrogenicity. A few days later he is visited by her twin sister with atrophic breasts, senile vaginitis and many bizarre symptoms of the menopause. Finding a low cornification index, he reluctantly prescribes estrogen in low dosage and a tranquilizer "to tide her over this trying time." She immediately challenges him. "Logically, Doctor, my estrogen level must be elevated to that of my sister, or you must reduce her level to mine. You cannot have it both ways."

Replacement therapy with both hormones presents few problems when the ovaries have been removed accompanied by hysterectomy.

Dr. Wilson is consulting Obstetrician and Gynecologist, Methodist Hospital, Brooklyn, New York.

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If the ovaries are removed or functionally dead but the uterus intact, cyclic replacement therapy will result in withdrawal bleeding. This cannot be dispensed with because of the systemic metabolic effects of progesterone in addition to its needed target action on the perilobular and alveolar tissues of the breasts. This bleeding prevents endometrial hyperplasia. Endometrial cancer may be inhibited, or even cured, by progesterone and its derivatives.[2] Early *in situ* endometrial cancer is surely restricted from further invasion by the wholesale destruction of surrounding tissues and its subsequent lavage by rhythmic bleeding.

If steroid hormones remained in their glands or origin, they would be useless to body economy. Target or any other cells do not care where their estrogen and progesterone originate. Fundamentally the gonads are pharmaceutical laboratories; when the ovaries close up shop, the soma is quite content to receive its steroids from the corner pharmacy.

The percentage of superficial cells in the Papanicolaou smear is a valuable tool in estimating estrogen deficiency—"treat the smear."[3]

The ingestion of a tablet daily represents the essential difference between a life partly lived or a full one—a body and mind of multiple divisions or homeostasis, the complete woman. Over a hundred years ago, a French gynecologist graphically described postmenopausal women . . . "Compelled to yield to the power of time, women now cease to exist for the species, and henceforward live only for themselves. Their futures are stamped with the impress of futility." One of our best-known and loved professors recently said, "Something must be done for these poor women." The menopause became as obsolete as the bow and arrow the day potent oral progestogens were born.

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USE OF WHITE MINERAL OIL IN ENEMAS

(*Continued from Page 9*)

to provide effective and comfortable evacuation of the colon without irritation.

2. The value of white mineral oil as an additive to the soap and water enema was studied in cases of fecal impaction, dyschezia, chronic atonic constipation, and preparation for proctoscopy or roentgenography.

3. For routine use and for chronic atonic constipation a standard evacuant oil emulsion enema consisting of 1 quart of warm water, 1 gram (one level teaspoonful) of mild soap and 2 oz. of white mineral oil is recommended. The soap is dissolved in the water and the mineral oil added to form an emulsion.

4. For fecal impaction, the recommended procedure is a straight white mineral oil retention enema, introduced by means of a rectal bulb, in an amount varying between 1 and 3 ounces. This enema may be retained from two to eight hours, depending on the length of time needed to soften the hard masses of stool. Subsequent evacuant enemas should be given consisting of warm water, mild soapsuds and mineral oil.

5. For proctoscopy and roentgenography complete evacuation of the rectum and bowel was observed, allowing clear proctoscopic and roentgenographic visualization when an oil emulsion enema was given on the evening before and again on the morning of the examination.

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Delaware Academy of General Practice

PRESIDENT'S REPORT—1963

In December of last year, the Education Committee immediately began work on the 1963 Scientific Assembly and the Spring Symposium. This allowed them to procure the best possible speakers and programs.

March 30-April 1, at the Annual Assembly of the AAGP in Chicago, Marjorie Conrad was nominated for National Director the day prior to elections and lost by a small margin. It was a strong showing for such short notice.

The following Saturday, April 6th, our Spring Symposium was held at the Wilmington General Hospital. This was a successful joint conference on Physical Medicine and Rehabilitation with the Pennsylvania Academy of Physical Medicine.

June was notable for two things—increasing the annual dues from $30 to $40 and the marriage of our very competent, well-liked Executive Secretary to Miss Meredith Prince. A wedding present and purse were provided by generous donations of many members.

In September, President-elect Platt and Dr. Conrad attended the S.O.C. in Kansas City, always an informative and worthwhile event.

At the Region I Meeting in New York City, Dr. Conrad attended the Hospital Section, Dr. Platt, the Education Section, and your president, the Membership Workshop. Reports of each of these are attached to the November monthly meeting minutes.

The following recommendations for the membership were made after careful thought and deliberation.

1. Wholehearted cooperation and help of the majority of the membership must be put behind the candidacy of Marjorie Conrad for the office of National Director this coming year in Atlantic City. I urge you one and all to attend the Assembly Meetings not only to promote our candidate but for your own interest as well. Every one who has attended is impressed by the transactions and gains insight into problems of the general practitioner throughout the country. We intend to have a Hospitality Room which should be a focal point for Delawareans to meet their colleagues and friends.

2. The planning of programs one year in advance should be continued. The Spring Symposium is already well-outlined. Only the fall course, the monthly programs, and the '64 Assembly need be arranged. Avoiding a conflict with the Army-Navy game and the latter is worthwhile, if possible.

3. I urge you all to participate fully in your various staff responsibilities in the hospitals. Attend meetings, *do your part* in clinics, and serve well on staff committees. Unless we all do this to the best of our abilities, we are going to lose our privileges and the chance to obtain them for our successors. The "I am too busy" excuse just doesn't hold.

4. By having monthly programs with good local speakers, educational review of specialty subjects can be accomplished. The FM radio course also helps us keep abreast of current medical knowledge. The OB-Gyn College has offered a refresher course in their specialty, which is presently under consideration.

5. Finally, be proud of your chosen field of medicine and your Academy. No one can do more to avert socialized medicine than the conscientious, competent family physician. No branch of our profession is closer to the people, and, consequently, more responsible for medicine's public image. There can be no taint of ignorance, avarice, sloth or slovenliness in any of our daily ministrations to our patients. If we avoid the latter sins and strive for the above ideal, *General Practice* will not only endure but thrive.

Thank you for the honor of serving as your president this past year. Your assistance, support and tolerance are deeply appreciated.

William D. Shellenberger

In Brief

Studies On Diabetes Prevention Theory

Some young diabetics may be brought under control by a combination of diet and drugs which stimulate the body's ability to produce its own insulin—*if* the disease is detected and treated quickly, reports *The Lancet.** Some young diabetics who have had the disease for only a short time appear to have significant capacity to produce and release insulin upon proper stimulation. A high-fat diet which puts the least possible carbohydrate diet load on the pancreas and a sulfonylurea drug that may regenerate the pancreas' ability to produce insulin my be able to salvage these patients. These findings suggest that sulfonylurea drugs, given to diabetics whose insulin-producing cells are still responsive, may result in some regeneration of the cells. By contrast, another group of patients who had been diabetics for a long time—two to 17 years—did not respond to treatment, which was taken to mean that in long-standing diabetes the pancreas loses its reserve capacity to produce insulin. **2:764-765, Oct. 12, 1963*

Heart Bulletins

The Heart Bulletin and *Modern Concepts of Cardiovascular Disease* are distributed free of charge to all Delaware physicians requesting these through the Delaware Chapter of the American Heart Association. To be put on the mailing list write to: M. E. Mowery, Executive Director, The Delaware Heart Association, Inc., 1912 Shallcross Avenue, Wilmington.

Two new publications are now available: 1)*Congestive Heart Failure: A Guide for the Patient* which is available for general distribution through the Superintendent of Documents, Government Printing Office, Washington, D.C. at 10c per copy, $5.00 for 100; 2) A completely revised edition of *Understanding the Management of Congestive Heart Failure* presenting similar material for nurses and other health agency personnel. Single copies of both booklets are available without charge.

Clinical Center Studies

STUDY OF THALASSEMIA

The cooperation of physicians is requested in the referral of patients with Thalassemia major for a study in progress at the Clinical Center, NIH, Bethesda, Md. Patients who have not received transfusions within one month prior to admission to the NIH are preferred. Children patients must be over five years of age. Upon completion of the study, patients will be returned to the care of their referring physicians, who will receive a complete narrative summary and report of the findings. Physicians interested in having patients considered for admission may write, Dr. Sherman M. Weissman, Office of the Director of Intramural Research, National Cancer Institute, Bethesda, Md.

STUDY OF BLASTOMYCOSIS

Physicians are requested to refer patients for a special study now being conducted at the Clinical Center by the National Institute of Allergy and Infectious Diseases. Patients suffering from pulmonary, genitourinary or cutaneous lesions would be of interest—whether untreated or previously treated and in relapse. If interested, contact John P. Utz, M.D., Chief, Infectious Diseases Service, National Institute of Allergy and Infectious Diseases, Bethesda.

Auxiliary Affairs

STATE PRESIDENT'S ANNUAL REPORT

It is difficult to realize my term of office in this organization has expired. My year of service was a busy and active one, but a rewarding and enriching one. I have always held the philosophy that "what I can do I cannot do alone," and my experience this past year proved this to be more than true. I am grateful to the Board of Directors, the Executive Board, each committee chairman, and every member for your loyal support and service.

I now ask you to do a bit of introspection with me. If you have been reading the Bulletin, and I hope you have, you are familiar with the phrase, "Why Auxiliary?" I am sure many of us have asked that question at some time, but if we reflect and remember our basic auxiliary aims—the answer is clear. We are a unique group—all doctors' wives or daughters and our basic aims are those set forth in the Constitution—

1. To assist the Medical Society of Delaware in its program for the advancement of medicine and public health.
2. To fulfill its function as may be needed by county, district, or state meetings.
3. To coordinate and advise concerning the activities of constituent auxiliaries.

I might add another objective—To cultivate friendly relations and promote mutual understanding among doctors' families.

In her article in the September Bulletin, Mrs. John Wagner reminded us that time, like money, must be invested wisely. We all agree with her that it has become increasingly difficult for a doctor's wife to decide where she should invest her free time. Most of our members are active leaders and responsible workers in every phase of community life. In this capacity we are most effective salesmen of the objectives of our medical society. Service to the community is our greatest contribution and should continue. However, we should guard against becoming so involved in other activities that we neglect our auxiliary. Before closing, I would like to read you a poem which I heard a past president read at an Auxiliary meeting many years ago. It is a poem that impressed me then and one which I have always remembered:

Are you an active member, the kind who would be missed:
Or are you content that your name is on the list?
Do you attend the meetings and mingle with the flock?
Or, do you stay at home—and criticize—and knock?
Do you take an active part—to help our cause along?
Or are you satisfied to be—the kind that just belongs?
The Auxiliary has prgrams scheduled that I'm sure you've heard about
And it is your duty to come and to help out.
Come to meetings regularly and help with heart and hand,
Don't be just a member—take an active stand.
Think this over members—
You know right from wrong
Be an active member—
Do not just belong.

Respectfully submitted,

Marguerite Richards, President

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THE OFFICE MANAGEMENT OF FINGERTIP INJURIES

• The practicing physician is more often called upon to treat finger-tip injuries than any other type of traumatic hand problem. Not only are these injuries often the most perplexing, but they concurrently may be the most incapacitating.

PETER R. COGGINS, M.D.

The most common of the important injuries to the hand are those associated with the fingertips. Generally, these injuries are treated with a moderate degree of disdain both because of the supposedly lesser magnitude of the problem and the touted relative simplicity in the repair. However, like all hand surgery, there is no chance for recovery if a technical mistake is made—instead some sort of secondary substitution procedure is necessary, and the final results are never as satisfactory. Hence, a thorough understanding of the physiologic principles and the techniques of treatment will increase the percentage of successful procedures, obviate delayed healing and fibrosis, and shorten post-operative convalescence. The purpose of this article will be to elucidate the more common fingertip problems that can be handled as office procedures, not for the general or industrial surgeon who is quite familiar with these techniques, but for the physician who only occasionally is called upon to treat these injuries.

Before discussing special types of injuries, something should be said regarding the preoperative management of hand wounds. The success or failure of any procedure will depend to a large extent on the presence or absence of infection. Hence, wound care must be considered as important as the operative procedure itself. In these injuries, a sterile gauze sponge is placed in the wound itself, and a surgical brush is used to cleanse the skin from the elbow to the fingertips, with care taken to manicure the nails, removing all dirt and grease. It makes little difference whether pHisoHex, Betadine or Septisol is used. The important point is that a surgical scrub for 10 minutes is performed. Sterile 4-inch stockinette is then rolled over the entire hand and forearm to the elbow, and suitable aperatures are cut in it depending on the location of the wound. The digit is then anesthetized.

Adrenalin should never be used in conjunction with local anesthetics in hand surgery. The risk of thrombosis in a digital

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vessel is too great to warrant the use of any local vasoconstrictor regardless of the dilution.

The most commonly used nerve blocks are digital and median. Digital nerve block is easily accomplished by initially injecting in the midline at the level of the knuckle, then passing the needle downwards along either side of the metacarpel-phalangeal joint injecting serveral cc's of anesthetic. For a median nerve block, the point of interesection of the proximal wrist-crease and the midaxial line of the third digit is located (this point will be just lateral to the palmaris longus tendon), and a needle is passed vertically downward for 1.5 cms. where the median nerve is entered. Tingling in the distribution of the median nerve over the palmar surface of the first three digits is usually noted by the patient. Following this, 5 to 10 cc's of 1% Xylocaine is injected.

A tourniquet is next applied after elevation and compression of the hand to diminish venous congestion. A simple, heavy, sterile rubber band can be used for a digit, while a blood pressure with the pressure to 230 or higher can be used if there is associated surgery proximal to the finger.

Attention is next turned to the wound itself. After a thorough inspection, the wound is irrigated with copious amounts of sterile water or saline. All clots, foreign bodies and all devitalized tissues are surgically removed.

In most fingertip injuries, closure by approximation of the wound edges is not possible because of the inelastic quality of the tissues. Therefore, skin graft must be introduced either in the form of a free skin graft or a pedicle flap. The latter is usually out of the province of an office procedure. The free skin graft may either be a split thickness graft, i.e. one containing the epidermis and a variable quantity of the dermis or a full thickness skin graft, containing epidermis as well as a full thickness of dermis.

The simplest way of obtaining a split thickness graft is with a fresh, sterile, double-edge razor blade, broken in half on the longitudinal axis and held in a hemostat. A horizontal cut is made through the skin with a sawing motion on the anesthetized volar aspect of the forearm. The skin should be held taut and care taken not to continue the cut into the deeper layers of dermis. At times, a small quantity of sterile vaseline will lubricate the skin so that the graft may be obtained more easily. After the taking of the graft, a single layer of fine mesh vaseline or Furacin gauze is applied followed by a moist gauze dressing and several layers of dry gauze. Telfa or other non-absorbing and non-adhering dressings should never be applied. The wound is redressed down to the fine mesh gauze the following day and left exposed thereafter. If a heavy, serous exudate develops, intermittent moist dressings will remove it; and, after a day or so, the wound will remain dry. The fine mesh gauze dressing is thereafter allowed to peel off without assistance. The full thickness graft, since it contains all dermal elements, must be somewhat limited in size. The best donor site in males is the forearm over the head of the radius, while in women and children the non-hair bearing areas of the groin are used. After anesthetizing the area, an elliptical incision is made, the graft removed and meticulously defatted with a fine scissors while inverted over the index finger. The donor site is then primarily sutured.

Since free grafts are a semipermeable membrane and depend on their nourishment by osmosis, anything which blocks this process will bring about loss of the graft. A thin layer of blood between the graft and the wound bed, constant motion of the graft over the wound, or infection will all disrupt the process. Prevention of hematoma is accomplished by both meticulous wound care, by the use of moist sponges (nothing will increase bleeding more than the constant rubbing of wound with an abrasive dry sponge) and by the use of a stent dressing which holds the graft in place. When constructing the stent dressing, the sutures used to hold the wet cotton balls over the vaseline gauze covered graft are placed a half centimeter or so away from the wound edge. This will obviate the development of bleeding from the edges of the wound and spreading beneath the graft. A split thickness graft will need nothing other than tailoring around the wound edge removing excess of graft on normal skin.

However, a full thickness graft will need accurate approximation of the edges with fine silk or nylon suture (5-0 or 6-0) since the initial vascularization during the first 12 hours of this type of graft is through the periphery and only later does the blood supply enter through the base.

The end results of a split thickness graft will functionally and cosmetically be poorer than with full thickness grafts, but the increase in successful takes especially in substandard conditions justifies its use as the most practicable type of free graft.

Above all other considerations, the most important point is to conserve finger length. This is of greatest importance in the prime digits—the thumb and index finger—since length is necessary if they are to perform adequately as pincers. In general when the wound is located in those tactile areas in which precision movements or opposition are involved, a tender scar or insensitive grafted area is to be avoided. By and large, the use of simple free graft is best reserved for traumatic amputations of the medial three digits in patients in whom appearance and sensitivity of these sites is not of essential importance. However, most of the following rules are given to serve as guidelines only; and, depending on the situation, exceptions can be made.

Pedicle Wounds—Lacerations through the base of the nail or through the volar pad leaving it attached only by a small pedicle should all be reapproximated by fine 6-0 silk or wire sutures. Remember that the initial trauma to the tissues has already diminished the blood supply and that rough handling, kinking the pedicle and the use of crushing hemostats or forceps will all increase chances of failure. The percentage of good results in this type of injury should be high. Reinervation of the pedicle can also be expected over a four to six month period.

Loss of Fingertip Without Pedicle Attachment—The success in reapproximation of a composite part such as a fingertip is good in children but poor in adults. If it is attempted, the tip should be placed in either a penicillin-streptomycin solution (10 million units penicillin and 2.0 grams streptomycin) or a 0.5% Neomycin solution for 20 minutes while the patient is being prepared.

Again, fine sutures should be utilized to attach the fingertip. Venous congestion rather than arterial insufficiency will invariably bring about loss of the reapproximated part. Edema therefore must be prevented at all costs with the injection of hyaluronidase (1500 units) locally, a bulky fluff gauze pressure dressing and elevation of the part.

Much the preferred procedure especially in adults, and in non-prime digits (not the first or second finger), is to remove the skin from the amputated part, carefully excising all fat and subcutaneous tissue and utilizing this as a free full thickness graft. If a prime digit is involved, a cross finger flap is the procedure of choice because of the need for subcutaneous tissue coverage as well.

Flush Losses—The maxim here is to avoid further loss of length. Amputations through the nail bed with bone and soft tissue loss of equal length should not be closed by shortening the bone. Instead, a thin split thickness graft obtained from the volar aspect of the forearm should be used. This will give inadequate soft tissue tip coverage, but, during the postoperative period, the split thickness graft will contract pulling normal tissues in over the tip and giving a perfectly adequate fingertip.

The other method of allowing the wound to granulate in and to close spontaneously is not recommended since an open draining wound is present for upwards of four to six weeks. A working patient would lose considerably more time from employment with this type of procedure.

Fingernail Injuries—The important consideration here is to obtain accurate reapproximation of the nail bed. If not, an irregular, snag-tooth nail will result. The remaining nail should be removed, 6-0 silk suture utilized to reapproximate the nail bed, and a plain gauze dressing applied.

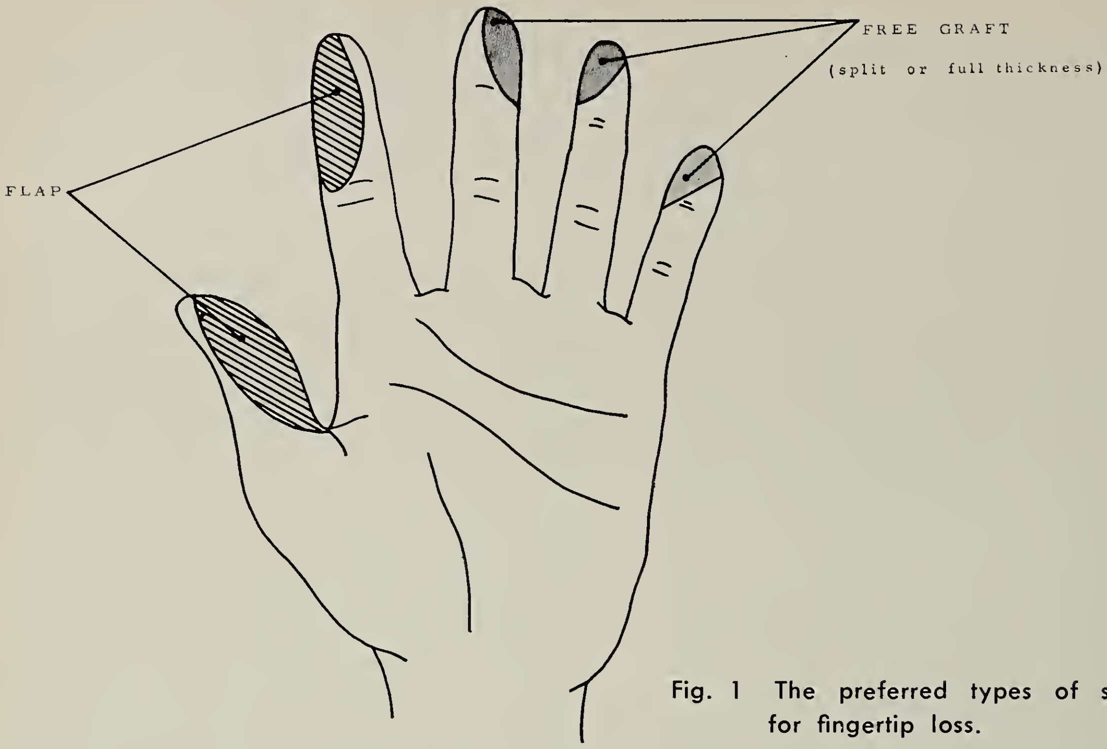

Fig. 1 The preferred types of skin coverage for fingertip loss.

If the injury is a tangential one with partial soft tissue and nail-bed loss in either the third, fourth or fifth digits, a split thickness graft may be used even if there is partial exposure of the cortical bone. The terminal phalanx can be cut back just enough to obtain soft tissue closure over bone and then the graft applied. If however, the injury is on the thumb or index finger, then under no circumstances should shortening of the digit be performed. The situation is better serviced by a pedicle flap procedure. (Fig. 1)

Contusion Injuries—Because of the diffuse edema secondary to crush and contusion injuries, obtaining non-tension primary skin closure is not always possible. In these injuries initial loss of skin and subcutaneous tissue is not at first a prominent feature. Secondary vascular thrombosis gives rise to post-traumatic edema which then further devitalizes tissue and extensive skin necrosis results. After adequate debridement of all non-viable tissue, a split thickness graft may be used to give a wound closure without tension. Post operatively, the tissues should be injected with 1500 units of hyaluronidase followed by a bulky gauze dressing and elevation of the part. The dressing should be cut down to the skin within 12 hours postoperatively in order to relieve any compression developing due to swelling of the digits, and then retaped. Strips of tape completely encircling the finger should never be used.

Fractures of the Terminal Phalanx—These are usually associated with contusion type injuries. The care of the soft tissue wound is the primary consideration, and the fracture receives no special attention. If devitalized bone is present, it should be removed, the fracture reduced by suture of the soft parts, and the digit splinted for 48 to 72 hours.

Terminal phalangeal fractures occasionally may be associated with flexor or extensor tendon avulsion, and determination should be made prior to the institution of any specific therapy. While repair of avulsed flexor or extensor tendons is a hospital procedure, an exception is the mallet finger usually resulting from a stubbing injury to the tip of the digit causing violent flexon. There is a tearing of the extensor tendon proximal to the point of insertion in the distal phalanx. If there is no associated fracture of the terminal phalanx, then closed treatment can be carried

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PROSTHETIC COMPONENTS FROM "TEFLON"* AND SILICONE FOR SUPPORTIVE AND CORRECTIVE SURGERY

● **Medical research today is very exciting. It is on the threshold of opening up a whole new era in restorative and curative surgery. The use of inert plastics bypasses practically all of the complications of antigen-antibody reactions. Man is beginning to see the fruition of some of his age old dreams. Replacement by these plastics can fulfill the function of worn out and defective biological parts without introducing new incompatibilities.**

Joseph F. Hughes, M.D.
John F. Lontz, Ph.D.

Within the past 25 years two new, distinct materials have come into prominence, each with its own characteristics and merits, for highly promising applications in surgery. Of these, 'Teflon" in the convention plastics sense serves the requirements of a rigid material, whereas the silicon resin provides the flexible or rubber-like requirements. To be sure, they are not interchangeable but often complementary. Hence over the years, these two synthetic resins, the former a plastic while the other an elastomer, have been applied increasing as prosthetic devices, both internally as implants and externally for extracorporeal circulation and drainage, to correct or replace numerous physiological functions. The more recent developments in fluorocarbon and silicone polymers have accentuated the use and improved design for tubing, cannulae, obturators, valves, etc., with some being available commercially in standard forms. Indeed these two materials with their special quality of chemical resistance are part of the technologic advance considered in one comment (1) as the greatest since the development of steel.

Teflon fluorocarbon resins are available in various forms that include tubing, sheet, film, filaments and thread, and woven or knitted structures. Many physical or mechanical variations of these forms have been applied for laboratory and clinical applications, the choice being primarily on the basis of being the most advanced polymeric material toward attaining the ultimate in chemical and biological inertness. However, these merits alone cannot provide the complete exemption against reactivity in physiological systems inasmuch as the full implications of electrokinetic[2] and porosity, along with mechanical design, will always have to be considered in corrective or supporting surgery. The electrokinetic implication is not too well understood but is evident from measurements of surface potential, often referred to as the zeta-potential, in plasma and aqueous solutions,[3] the effects of this quality appears to be important in assaying protein changes. Porosity or open structure can play an important role in tissue reaction as was shown by the work of the Oppenheimers.[4] For some time to come, biological compatibility of any plastic material in terms of evident or non-evident tissue reaction will persist as an unsolved problem until the effects of more or less physical aspects are resolved.[5] We would like next to discuss some of the published accounts of favorable as well as the non-favorable reactivity with exposure to tissues.

Evidence Of Favorable Reaction Or Compatibilty

La Veen and Barbero[6] give the best phenomenological comparison of Teflon with that of celluloid, "Lucite" acrylic resin, and nylon. Finely divided chips of Teflon em-

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(*) Registered trade-mark of E. I. duPont de Nemours and Co., Inc., for its fluorocarban resins.

bedded in the peritoneal cavity of dogs for 70 days showed no fibroblastic reaction and the chips could be removed from the adhesions. No proliferative foreign reaction was present. Calnan[7] found that living matter can invade the discontinous structure, or micropores, of the molded form of Teflon, or TFE resin as it is termed, and in so doing can open up this structure to make it readily porous to water or serum. The effects observed in the biological alteration of the implant are thus believed to be due to physical and not chemical causes. One could speculate that this porosity may indeed be fortuitous in allowing the biological system set up defensive permeation to counteract surface coagulation or occlusion. However, just how much and what kind of porosity, in terms of size and distribution needed for optimum compatibility, has yet to be investigated and formulated.

In the case of interaction with blood under dynamic conditions, we can refer to the work of Lee[8] and co-workers who have reported favorable reactions with oxygenation membranes made of Teflon type of membrane. Extruded tubing made from Teflon is now an accepted component for cannulae used in venesection for tying into the artificial kidney machine for hemodialysis. The long term experience, now over a year or more, has been described by Quinton and co-workers[9] with highly favorable results. Indeed, the combination of the hard, stiff tubing of Teflon supplemented with the flexible silicon elastomer tubing provides an outstanding example of the complementary use of these two materials for the proper design of a complete prosthetic device. These cannulae are being used by many kidney centers and the frequent references to the utility, and indeed the indispensibility of the Teflon in this supportive surgery, emphasizes the high degree of surgical acceptance. We are now developing a new series of novel designs aimed toward preserving distal portions of the vascular segmentation, already implanted in animals, in an effort to make available still improved compatible cannulation.

A complete prosthesis made from solid Teflon was used by Brown and co-workers[10] for the total loss of the lower jaw. The patient was a young female with complete loss of all osseous elements in the lower jaw due to Hand-Schuller-Christian or related disease. Luddington and Woodward[11] used Teflon prostheses in 26 patients afflicted with difficult hernias. These patients had no recurrence of their hernias in a 6 to 12 months follow-up. Kantrowitz and co-workers[12] have successfully implanted controllable pacemaker units, embedded entirely in Teflon, in the treatment of complete heart block in 14 patients.

In a series of tests involving 284 implants in small animals using synthetic materials including silicone and polyvinyl alcohol as well as Teflon, Brown and co-workers[13,14] reported only a single fibroma close to a polyvinyl alcohol implant was found, but full serial sections had not been done. These results would indicate that the advantages of synthetic materials outweigh the inference that tumor formation in laboratory animals implies a significant risk of clinical use of medical grade materials.

In the case of silicones for prosthesis in medical applications, Barley[15] has reviewed an imposing account of the successful and acceptable compatibility of various forms of silicone materials. In a specific instance, Sanislov[16] has found that silicones are superior to natural rubber when used for short or prolonged periods within the common bile duct.

Evidence Of Unfavorable Reaction

Oppenheimer and co-workers[4,17] have reported tumor incidence with continous sheet forms of plastics including that made of Teflon. Their studies indicated that the incidence is reduced some 50 percent with perforated films, with still greater reduction in the case of plastic sponges and almost no tumor incidence with textile, fibrous, or powder forms of the synthetic polymers. This appears to be consistent with the observed low reactivity of woven structures in vascular prostheses reported by Harrison.[18] In tests with guinea pigs, Little[5] observed some fibroblast reaction in 6 weeks implantation using 1 millimeter thick sheet, but the severity comparing other implants was not reported.

Summary

There is little doubt that any artificial foreign material placed adjacent to or within a biological environment will induce some reaction of varying severity; the chemically resistant fluorocarbon resins, such as Teflon, and silicone resins will be no exceptions. Indeed it is seen that the physical form or state, including porosity, and possibly some electrokinetic quality can be a factor in compatibility. The clinical or surgical merit may often outweigh the expected consequences that can be often viewed as minor in relation to alternate choice of surgical non-intervention. For instance, Wesolowski[19] strongly emphasizes the unimportance of biological reactivity when it comes to considering synthetic graft walls, an application of the most severe to be sure with an internally contained plastic material. What needs to be emphasized then is the non-deterioration of the plastic prostheses and the properly designed component.

In retrospect, there is need to accentuate the use of the new materials such as Teflon and silicone resins and to exploit the advantages that these have to offer. Finally, more effort needs to be done on devising all-plastic extracorporeal dialyzing and oxygenating systems. This Foundation is pursuing this extended application of plastic substitutes and is presently evaluating a kidney machine fabricated practically completely from common plastics, using regenerated celluose or cellophane, along with parts made of Teflon and silicone resins.

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OFFICE MANAGEMENT OF FINGERTIP INJURIES

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out. A simple short dorsal splint* which holds the distal interphalangeal joint in hyperextension, is utilized continuously for four weeks even when the patient is showering. It is worn for another month at night. Recovery is usually complete in 75% of the cases. If a volar drift remains in the terminal phalanx after eight months, then operative treatment with reattachment of the tendon is indicated. It is imperative however, that during this period the mobility of the distal interphalangeal joint be preserved with active and passive exercises.

In conclusion, it should again be stressed that the success or failure of these procedures lay in the appreciation of the physiologic nuances of the problem involved, the delicate handling of tissues and the close attention to technical details. Indeed a fracture of a phalanx may be of more ultimate importance than a fracture of the tibia and it behooves the physician to employ those techniques which will bring about a rapid convalescence with a minimum of undesirable sequellae.

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*Bunnell splint supplied by J. A. Preston Corporation, New York.

CANCER OF THE COLON AND RECTUM:

Current Concepts

• Cancer of the colon and rectum is a curable disease if treated early. In too many cases treatment is instituted after spread or metastases have occurred. If mortality is to be reduced earlier diagnosis is mandatory. Proctosigmoidoscopy is essential to earlier diagnosis and must become a part of every physical examination.

Robert A. McGregor, M.D.

During the next 12 months approximately 40,000 people in the United States will die with cancer of the colon or rectum. This mortality rate has not been reduced significantly nor changed effectively during the past three decades. In recent years reports have appeared indicating an increase in survival rates for patients with cancer of the colon and rectum; but on close analysis it is evident that the statistics are based upon selected cases, or mathematical manipulations are employed which result in more favorable results. When we consider all patients with the diagnosis of cancer of the colon and rectum, without referring to various stage or spread classifications, the prognosis must be considered poor. On an overall basis, three-fourths of all patients with cancer of the colon and rectum will die within five years from the time of diagnosis.

The fact that an individual who develops a cancer of the colon or rectum has the possibility but not the probability of cure is an appalling situation. This must be the concern of every physician and, if it is humanly possible to increase the cure rates for cancer of the colon and rectum, it is our responsibility to do so. The purpose of this discussion is to review and reiterate some current concepts in the management of cancer of the colon and rectum.

Surgical literature today is replete with the advances which have been made in the surgical management of cancer of the colon and rectum. Improvements and refinements in surgical technique, preoperative and postoperative care, anesthesia and ancillary factors have been outstanding. Operations which formerly were formidable and fraught with disaster are now routine. In spite of all this, our cure rate remains poor. Extended radicality of operations, adjunct radiation therapy, chemotherapy and the like have not significantly improved the overall survival rate.

It is universally recognized that early or localized malignant lesions of the colon and rectum offer an excellent chance for cure. Therefore the very basis for adequate management of cancer of the colon and rectum is early detection and early surgical intervention. Until we have some proved method of curing all cancer, our only hope in increasing survival lies in earlier diagnosis.

This is an age in which almost any topic

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may be presented in fact or fancy on television or in the movies. Displays of sordid sex, sadism, violence and crime are commonplace; yet in the average American community today thde word "rectum" is not used in polite society. The average individual rarely thinks of his colon and rectum except as a part of the excretory mechanism.

In addition to the taboos associated with the organs themselves, there is the problem of the public's irrational fear of cancer. Frequently we see patients who have rectal bleeding and who have delayed seeing a physician simply because they know it is a symptom of cancer. There are also many patients who avoid seeking medical advice because of fear of a painful and somewhat shameful examination.

Public Education

These problems can be overcome by public education. The facts of cancer of the colon and rectum must be given wide publicity. There must be enough mass media coverage so that the subject loses its veil of secrecy and its tag of shame or indecency. Further, the public must be made aware that cancer of the colon and rectum can be cured if treated early, and that the method of diagnosis is simple, painless and may be accomplished without loss of personal dignity or decorum.

A nationwide campaign to enlighten the American public on the subject of cancer of the colon and rectum is in progress. It is hoped that this campaign will make everyone as familiar with this type of cancer as similar campaigns have for cancer of the female organs. If this campaign is successful, the term "proctosigmoidoscopy" will be as familiar to the layman as the term "Pap Smear" is now. With proper education, the average patient will come not only to expect but also to demand a complete proctologic examination.

If this occurs, as it certainly must, who is going to perform all these proctologic examinations? The proctologists, gastroenterologists and others who routinely do proctosigmoidoscopies cannot possibly accommodate the number of persons to be examined. Unfortunately, far too many physicians have neither the interest nor the training necessary to provide adequate proctologic examinations. This situation must be corrected. Every practictioner should be familiar with the technique of proctosigmoidoscopy. We cannot overemphasize the necessity for proctosigmoidoscopy as part of every routine general physical examination.

Management Of Adenomatous Polyps

In any discussion of cancer of the colon and rectum the problem of the management of adenomatous polyps must be considered. Since a question was aroused of the validity of the concept of the malignant potential or premalignant nature of adenomatous polyps, many studies and opinions have been reported. Some of these agree that polyps are not premalignant lesions; others state equally forcefully that polyps are the precursors of cancer. The question has not been answered and the controversary continues. It probably will be some time before a conclusion is evolved. While it is not difficult to see both sides of the question from a philosophical standpoint, if one becomes more philosophical than practical, poor management of the patient may result.

The management of small polyps of the rectum below the level of the peritoneal reflection is primarily academic. If these are easily accessible and the patient can be adequately followed, we cannot argue with those who, in the interest of pure science, wish to leave them in place until an arbitrary size in growth is reached or until surface changes occur.

Polyps of the colon above the reach of the sigmoidoscope are a different matter. It has been stated that radiologically demonstrated polyps of the colon should not be removed unless they are a certain diameter because the operative mortality for colotomy and polypectomy is greater than the expected statistical occurrence of malignancy. In our experience it is impossible to determine the state of benignancy or malignancy by radiographic size and shape. It has been our further experience that an appreciable number of additional polyps are not discovered by barium enema and air contrast studies. For these reasons we shall continue to recommend transcolonic polypectomy and total colonoscopy for polyps of the colon which are above the level easily accessible to the sigmoidoscope.

With our present knowledge of the treatment of cancer of the colon and rectum, surgery still offers the only chance for cure. Surgical treatment for cure must include meticulous attention to every possible detail which will increase the chances for a complete and adequate resection and the surgeon must not be guilty of inadvertantly endangering the patient's chances by traumatically inducing spread or seeding.

After the peritoneal cavity is opened, the entire cavity is explored. The site of the tumor and adjacent areas are studiously ignored until it has been determined that there is no gross evidence of spread or metastases. Before any manipulation of the segment of bowel containing the tumor, the segment is isolated with either ties or clamps. Very early in the operative procedure the venous drainage of the tumor area is isolated and divided. In cases of cancer of the descending colon, sigmoid or rectum, the inferior mesenteric artery is isolated as early as possible and divided at its aortic origin.

In patients with cancer of the descending colon, sigmoid or rectum, whose general condition does not contraindicate an extended procedure, we perform aortoiliopelvic lymphadenectomy with an en-bloc dissection of the lymphatic tissue from the level of the inferior border of the duodenum down over the iliacs into the pelvis to the obturator foramina. This is a time-consuming and tedious procedure but, if carefully done, it does not contribute to morbidity. Care must be exercised to prevent laceration of the vena cava and other vessels, and anadequate supply of blood for replacement must be on hand in case excessive bleeding occurs inadvertantly.

It is always distressing to physicians who treat patients with cancer of the colon and rectum when palliative or terminal care is required. It is not our purpose to delve into the philosophy of the moral standards to be used in the management of incurable cancer patients, but we believe that any available method proposed for the relief of pain or the diminution of morbidity should be employed, even on an experimental basis, if it does not contribute to the patient's discomfort or hasten his demise.

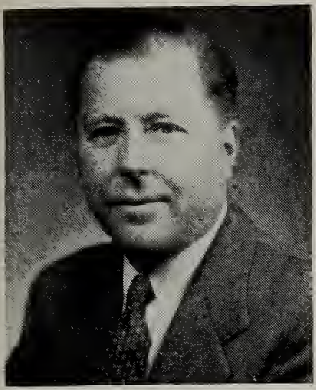
Our general principles in the management of inoperable, recurrent or metastatic disease are those of maintaining the patient in as comfortable a position as possible. In addition to this we do not hesitate to recommend palliative x-ray therapy or chemotherapy when there is a possibility that they will be helpful. In most instances when a localized recurrence is encountered we perform wide excision. If spread to the pelvis or bony metastases have occurred x-ray therapy is frequently helpful. X-ray therapy is frequently beneficial in the relief of pain due to relatively localized metastases. It is too early to accurately evaluate the results of chemotherapy in the treatment of metastases but we have seen several patients who have experienced marked relief of pain and definite objective decrease in ths size of palpable abdominal metastatic tumors after one or more courses of chemotherapy.

In conclusion, the concepts in the management of cancer of the colon and rectum currently employed may be summarized in three brief sentences.

1. With our present knowledge of the cause and core of cancer, we can hope to increase survival rates only by achieving earlier diagnosis and treatment.

2. The surgical treatment for cure of cancer of the colon and rectum must include all currently accepted technical and mechanical refinements to insure adequate resection and to prevent unnecessary and unintentional spread, seeding and metastases.

3. We must use every means at hand, experimental or otherwise, to control inoperable, recurrent or metastatic disease so long as it is in the interest of the general welfare of the patient.



President's Page

MENTAL HEALTH PLANNING

The greatest health problem in the Nation today is mental and emotional illness. The role of the physician—the general practitioner, the specialist, the research scientist—is as important in the fight against this illness, and on behalf of its victims, as in the efforts against tuberculosis, cancer, heart disease and other maladies.

The State of Delaware has recently embarked upon a Mental Health Planning Project for the purpose of determining what needs to be done to provide adequate, community-based mental health services easily accessible to all citizens. The Planning Project has a three-fold goal:

1. To identify and determine the extent of the mental health needs.
2. To assess the adequacy and accessibility of existing mental health resources, both facilities and services.
3. To plan to develop, expand and/or create mental health facilities and services.

You are urged to cooperate with this study and to give the ques-
Planning Project certain basic data from physicians that will (1) indicate the numbers and types of cases needing psychiatric care; (2) help in evaluating the actual accessibility and effectiveness, in relation to the cases you encounter, of the facilities and services already established; (3) serve to document the need for providing new or additional facilities and services; and (4) help determine the type and location of mental health facilities and services that would provide maximum benefit to the population of the area to be served.

You are urged to cooperate with this study and to give the questionnaires your serious attention. Your Medical Society has endorsed the State Mental Health Planning Project and is officially represented on the State Planning Committee and its executive committee by Joseph Abbiss, M.D. Our position of endorsement is in keeping with the American Medical Association's concern in the area of mental health and its recommendation to physicians, as individuals and as members of State Medical Societies, to cooperate in all efforts to resolve this tremendous health problem. Let's do our part in making this important study a success.

Floyd I. Hudson

Delaware Academy of General Practice

THE MEDICAL COUNCIL AND THE STATE BOARD OF EXAMINERS

The Committee appointed by the President of the Academy of General Practice wishes to bring to the attention of our members the present status of the Medical Council and the State Board of Medical Examiners of Delaware. The legal aspects are found in Chapter 17, Title 24 of the Delaware Code relating to Medicine, Surgery, and Osteopathy.

The Medical Council consists of the President Judge of the Superior Court, the President of the State Board of Medical Examiners, and a third member elected by a majority of the Board from the membership of the Medical Society of Delaware and not a member of the Board of Medical Examiners.

The Council makes, adopts, and promulgates rules and regulations for its own government, and for the proper supervision and control of the professional conduct of all persons under its jurisdiction. It organizes itself annually within 10 days from the date of the organization of the Board of Medical Examiners, and elects from its own number a President and Secretary, who also acts as Treasurer, both of whom hold their offices for 2 years. The members are entitled to receive their necessary expenses and $25.00 per day for each meeting of the Medical Council.

The Medical Council holds at least two stated meetings per year, issues certificates for licenses to practice medicine and surgery to such applicants as have presented the required diplomas and successfully passed the required examinations.

All fees and other money received are paid to the State Treasurer, who in turn pays all expenses of the Medical Council.

The State Board of Medical Examiners represents the President and Fellows of the Medical Society of Delaware. A list of resident members is submitted by the Society by January 1st of each year and from this list the Governor appoints ten members. The tenure of office is for 4 years and is so arranged that two or three offices terminate each year; reappointments are frequently made.

The present Board consists of the following:

J. Beebe, Jr.	Surgeon	Sussex
A. M. Gehret	OB GYN	New Castle
G. R. Spong	GP	Kent
R. R. Layton	Surgeon	Kent
G. A. Beatty	Internist	New Castle
J. E. Marvil	EENT	Sussex
W. F. Preston	OB GYN	New Castle
I. M. Flinn	Orthopedist	New Castle
N. L. Cannon	Urologist	New Castle
C. C. Maroney	Urologist	New Castle

The Medical Council member not on the Board of Medical Examiners is Wallace M. Johnson, M.D., of Newark, Delaware.

Each appointee must be a registered physician in good standing, and shall have practiced Medicine or Surgery under the laws of this State for a period of not less than five years prior to such appointment.

The Governor shall fill vacancies, and may remove any member of such Board for continued neglect of the duties required by the law, or on recommendation of the Medical Society of Delaware for unprofessional or dishonorable conduct.

The members of the Board of Examiners including the Osteopathic examiner (selected by the Delaware State Osteopathic Society) are entitled to receive, in addition to their necessary expenses, $10.00 per day for each meeting of said Board, to be paid out of the appropriation provided for this purpose.

An annual meeting of the Examining Board is held on the third Thursday of July.

The fee required of applicants for the examinations for the practice of Medicine or Surgery is $50.00

The Board of Medical Examiners submits to the Medical Council questions for thorough examinations in Anatomy, Physiology, Hygiene and Preventive Medicine, Chemistry, Surgery, Obstetrics and Gynecology, Pathology, Diagnosis, Materia Medica and Thera-

(*Continued on Page 49*)

Editorials

OXYGEN THERAPY

Doctor Alex M. Burgess of Providence, Rhode Island has long been interested in the proper use of oxygen in the treatment of patients. It was refreshing to see an article in the February 1st issue of JAMA by him and his group in which a comparative study was made of five common methods of administration of oxygen to the patient. The three primary factors to be considered are the efficiency of the system, its comfort to the patient, and its cost. He also presented in a concise table the causes of failure in each method and the dangers.

It is of interest to digress for a moment and consider Dr. Burgess' contribution to this important field of treatment. In an article entitled "A New Method of Administering Oxygen—A Preliminary Note," in the New England Journal of Medicine 207, 1078, 1932, he describes a box of sufficient size to contain the head of an adult or the head and upper thorax of a child. This box is closed on four sides but is completely open across the top. The oxygen is made to flow into the side of the box near the bottom and it was found that a flow of between 5 and 6 litres of oxygen would give a 40 to 50 percent oxygen saturation of the air inside the box. Burgess gave credit to Dr. Albert H. Miller for suggesting the general idea of this mode of administration. For several years Dr. Miller had used an open ether cone with the oxygen tube passing down the side so that it was then about half way down the cone. He found that with this method and if the cone was kept accurately applied to the patient's face, a sufficient high percentage of oxygen was inhaled to give therapeutic results with from three to five litres of oxygen per minute. The obvious disadvantage to this method was the necessity of keeping the cone properly applied. With the box, however, many of these disadvantages were overcome. It was obviously possible to give the patient medication and nourishment without disturbing the set-up and thereby not altering the oxygen concentration. The need for going into an oxygen tent is of course one of the severe drawbacks of its use.

Dr. Burgess presented this subject in greater detail in the same Journal on page 254 in 1934. He did indeed obtain excellent results with this ingenious device and it is regretted that its use was not more widespread.

Returning to the present study, Burgess found that the use of the naso-pharyngeal catheter is by far the most satisfactory means of delivering a high oxygen content to the patient. It is low in cost and relatively free from causes of failure. The rare complication of gastric distention or rupture can, of course, be prevented by proper application. The most serious drawback to this means of administration is the discomfort to the patient and, as we all know, the constant stream of oxygen into the naso-pharynx can at times be distressing to the patient.

The oxygen tent was found to give a satisfactory oxygen level if correctly applied and regularly tested. From the standpoint of patient comfort it is the preferred method but unlike the other methods, the cost is very high. There are more causes of failure in this method than in any others and the danger of fire from sparks is present although such is not common.

The other three methods (the Burgess box, cannula, and plastic face mask) fit in somewhere below these two preferred methods. They are all of low cost, are well tolerated by the patient, but except for the Burgess box they are markedly inefficient.

This brief but well written article is timely and should cause all of us to review critically our own use of this important and frequently used treatment.

In Brief

The ECFMG Temporary Certificate

The Educational Council for Foreign Medical Graduates will discontinue the issuance of ECFMG temporary certificates after the March 25, 1964, examination. At this time candidates scoring within five points of a passing grade of 75 will receive their temporary certificates. Beginning with the October 21 examination, only the Standard Certificate will be issued. The temporary certificates are valid for two years from date of examination, and until the next succeeding June 30. They are not renewable or extendable.

Cut In Research Aid Dangerous Precedent

"There will be costly consequences to the future of medical research if investigative budgets of N.I.H. continue to be cut by Congress and individual and institutional philanthropies divert their support to other fields," said Dr. Ralph E. Snyder, president and dean of New York Medical College. He added, *"It's ominous irony is further compounded by the current philanthropic opinion that huge Government allocations for research in medicine have considerably lessened the necessity for private support. Any diminishing of this support would be a blunder that would reap a bitter harvest in the generations to come."*

Scholarship For Delaware Students

Delaware students who must travel out of state for postgraduate professional training unavailable in Delaware are now eligible for financial assistance. Grants become available under the terms of a bill, SB 23, signed into law by Governor Carvel. The bill was supported by the Medical Society of Delaware. The study of medicine is among the programs included; awards will be made on the basis of academic qualifications and financial need. Students wishing to apply should contact the Secretary of the State Board of Education, Dover.

Comparative Prices

Buying a new shirt or three pairs of nylons or having a prescription filled all cost about the same, PMA reported. The average earning of U.S. manufacturing production workers was $96.96 per week and it took the worker an hour and 22 minutes to earn enough for his average prescription, cost of which was $3.26 at the end of 1962. Further statistics showed that a typical "low priced" car was earned in 1,132 hours; a tankful of gas cost 2 hours and 15 minutes' work; a carton of cigarettes was worth an hour's labor. The average employee worked nearly three hours for a tooth extraction; 44 minutes for a haircut; half an hour for a 6-pack of beer and 25 minutes for a movie ticket. These comparative figures were all computed from the most recently available federal government economic data. In the prescription category, a 51-minute "bargain" was a dozen tablets of life-saving penicillin.

Study Of Congenital Anosmia

Cooperation of physicians is requested in the referral of patients for congenital and hereditary anosmia for a study of this condition being conducted at the Clinical Center by the National Institute of Arthritis and Metabolic Diseases. Physicians interested may contact: Sol W. Rosen, M.D., Clinical Endocrinology Branch, National Institute of Arthritis and Metabolic Diseases, Bethesda.

Easter Seal Research Project

New electronic instruments adapted from those developed for space flights will be used in a unique research project to find out what happens in the brain as brain-damaged children try to learn. Financed by a $30,000 grant of the Easter Seal Foundation to Northwestern University, researchers will be able to record actual brain wave patterns of 325 children now under treatment at the University's Institute for Language Disorders. Instruments will record simultaneously the motor responses of the tongue in the act of using spoken language as well as the motions of the tongue in speaking; the breathing response to learning stimuli; and the brain waves of the child while he is engaged in the actual visual and auditory learning process. The project will continue over a five-year period.

Brief Briefs

- Public interest in coverage for nursing home care has been prompted by the recent expansion of health insurance coverage for the aged. Analysis of the plans show it is now available to persons of all ages. Benefits range from $6 to $20 a day under group plans and from $5 to $26.50 under individual plans. Most insurance policies strictly define the type of nursing home for which benefits will be allowed; require that care be provided for the treatment of, or convalescence from, an illness or injury be medically necessary and that it *not* be for custodial or residential purposes. Confinement must be recommended by a physician and follow a period of hospitalization.

- Foreign doctors and dentists may soon become "pen pals" of Americans who are interested in medicine, nursing, and dentistry. Called the "International Pen Friends Program," the project will be conducted by the Parker Pen Company in its pavillion at the New York World's Fair opening April 22. Visitors will be able to sign up for the program; names will be fed into a computer. Registrants can select the language in which they wish to correspond or the area of the world to which they desire to write and can choose from 389 specific subjects of interest.

- The new Red Cross flyer, heralding the 1964 March campaign, features the recent polio program sponsored by the Medical Society of Delaware. The picture of the volunteer nurse on the cover is Mrs. James P. Aikens, president of the Woman's Auxiliary.

- *The Food You Eat and Heaart Disease*, a revised and expanded edition of the PHS pamphlet, describes for laymen the association of diet with the cardiovascular diseases. It is offered as an aid to physicians to give their patients. Single copies are free; bulk copies for general distribution are ten cents each, or $7.50 for 100 copies. Contact: Superintendent of Documents, Government Printing Office, Washington 25, D.C.

Personal Glimpses

Herbert M. Baganz, M.D., Wilmington, will be honored by the American College of Physicians at its April session when he is inducted as a Fellow of the College . . . The January, 1964 issue of the "Archives of Environmental Health" carries a *Council Minute* on Lemuel C. McGee, M.D. Written with appreciation and insight, it is a tribute to his 10-year term as Member and Chairman of the AMA Council on Occupational Medicine, and reviews his full career . . .

PROCEEDINGS OF THE HOUSE OF DELEGATES

MEDICAL SOCIETY OF DELAWARE

PART III

The President: Next, the Committee on Union Health Facility. Dr. D'Alonzo.

REPORT OF THE COMMITTEE ON UNION HEALTH FACILITY

At a meeting that this committee had with a committee of the State Labor Council, AFL-CIO, Mr. Lemon, President of the Labor Council, stated that they had made previous studies of the desirability of a Union Health Facility in Wilmington, and had concluded that such a facility was desirable. He estimated that 2500 Union Members would serve as the establishing nucleus for such a facility, with its services to be expanded later to Union members' wives, and then to their whole families. He said, further, that there are about 30,000 Union members in the state of Delaware, a majority of whom are in the Wilmington area, and all of whom are potentially eligible to participate in the workings of such a center. He said that the Labor Council was anxious to have the advice and cooperation of the state's medical profession, and that they had requested an exploratory meeting to ask what type of facility might best meet the community needs and what might best be operated by the Union.

The Labor Committee put forth the following reasons for having such a center:

a. Physicians are frequently too busy to give optimal medical care.

b. Outpatient problems are not covered by insurance and Union Welfare plans.

c. While the saving of money is not a primary goal, the Union is interested in receiving the best possible medical care for the money spent.

The Union contemplates a center which would probably be diagnostic only at the beginning, but which would progress to diagnosis and treatment. This was to be operated by a full-time staff, both lay and medical, which would be complemented by a part-time staff of consultants. The available area is approximately two to three times the size of a floor in the Medical Arts Building.

Participation in the facility will be at the option of individual locals, but will not be at the option of individual workers. Financing will be through a sur-charge on Union dues, paid by the individual member. It was explained that Federal Law requires the equal distribution of Welfare funds when these are provided by the employer, and that in instances where the employer pays part or all of the individual's contribution, there can be no individual option.

The physicians present expressed their general willingness to cooperate with such a facility. However, they felt strongly that a facility to provide treatment would involve considerably more problems than had been contemplated by the Labor Council. These included, specifically, twenty-four-hour coverage, responsibility for continuity of care, and an obligation to provide a range of services that would in all probablity, exceed the ability of the Union to provide them economically. Furthermore, it was pointed out that most medical services are available in Wilmington, and that if the Union center were best to complement existing patterns of care, it should concentrate on diagnostic screening and preventive medicine. It was conceded that this was probably not the thought of individual Union members when the center was proposed. But it was given as the very strong feeling of the physicians that such a facility with referral to the family doctor in cases where this was warranted would be the most useful health undertaking that could be made by the Union. It is also the only project that will avoid unnecessary duplication of existing facilities. The Society also offered to cooperate in finding personnel for the clinic should this be desired.

The Labor representatives agreed that this was probably a departure from the type of facility they had been asked to plan, but appeared to feel that the advice had been given in good faith, and that reconsideration of the project was in order. Following the September annual meeting of the Labor Council, the Society was informed that the Council is pleased at the physicians' willingness to cooperate in the consideration of the center, and that further meetings will be requested.

Respectfully submitted,
C. A. D'ALONZO, M.D., Chairman

The report was accepted.

The President: It has been moved and seconded that we accept Dr. D'Alonzo's report. It did require the appointment of a committee to meet with the unions, and I think it was satisfactoryily handled. Are there any questions?

Dr. Vandervort: What was the reason for the committee backing this report? Did it feel that local hospitals didn't have adequate facilities? Did you feel that this could have been perhaps arranged in a different fashion? Do you feel that Wilmington needs a new diagnostic clinic? I don't quite understand all the background of it.

The Executive Secretary: Dr. Vandervort, I can't speak for what the committee feels. I attended the meeting. The Union apparently contemplated a treatment center, one that would assume responsibility for the care of their patients, union members. The Society's feeling was that this would be a duplication of facilities; it was not needed; it wasn't economically sound; and, furthermore, that it would involve considerably more in terms of effort, and of money, than the Union anticipated. After an explanation of this the Union delegates to the meeting apparently agreed.

The Committee's advice to the Union was that preventive care was probably a valid function for the Union to underwrite; that screening examinations, for example, were probably a legitimate function; that the results of these should be referred to the family doctor, and that the Union should not become involved in the treatment of diseases once these diseases were found.

Dr. Vandervort: Is there some advantage why the family doctor should not screen the patient?

The Executive Secretary: No, I don't think there is any advantage except that I believe that the Committee felt at the time that many people should get regular screening examinations who do not in fact get them, either because they don't bother, because they don't want to spend the money, or for other reasons.

Dr. Vandervort: Shouldn't the energy of the Society be expended to encourage people to have annual physical examinations by their own physician rather than to set up a new structure and have them done through this ultimate method that you propose?

The Executive Secretary: First of all, I didn't propose it. Secondly, the Society is not setting up the facility. The Labor Council is setting up the facility. I think it probable that the Labor Council is going to set up a facility no matter what the Medical Society thinks because there is no legal impediment to this. The Medical Society has advised them that if they are going to proceed, this is the best way to do it.

I have been asked by Dr. Preston to point out the AMA's feeling on union screening facilities. The AMA does endorse cooperation with unions on screening facilities.

The President: Are there any further questions or discussion on this motion to adopt?

Dr. Cannon: Will there be continuing liaison with the Labor Council on this matter?

The Executive Secretary: I spoke with Clement Lemon, President of the Labor Council, this week. He told me that at their annual meeting they moved to go ahead with the facility. They are not sure exactly what kind of facility they are going to have, and he asked if the Society would meet with him again. So in this sense yes. Whether it will continue after the facility is established and operating I don't know. Relations are reasonably cordial.

The President: Next we have the Delegates and Liaison Reports. Dr. McGuire's report as AMA Delegate was published in the August Journal and has been accepted as published.

The President; Next the Academy of Medicine report, Dr. Washburn.

REPORT OF THE REPRESENTATIVE TO THE DELAWARE ACADEMY OF MEDICINE

During the past year the activities of the Academy as reported in other years have been augmented by participation in programs of wide community interest and importance.

Through the generosity of a civic-minded citizen of Delaware, the officials of the Academy obtained funds to which were added a sum provided by the University of Delaware with which it was made possible to finance a survey to determine the feasibility of establishing a pre-clinical school of medicine at the University of Delaware.

The low cost term insurance program was enlarged to include Group Life Accident Insurance coverage to those members who might be interested.

We report with pleasure that at the request of the Boards of three of the general hospitals located in Wilmington; namely, the Delaware, Memorial, and Wilmington General Hospitals, the Academy accepted designation as the center for the administration of the educational program of the three hospitals mentioned and the office of the director of that program.

We report with pride that educational loans have been granted to seven students of medicine, seven students of dentistry, and to one physician who is to continue his education as a resident in orthopedic surgery. The sums allotted ranged from $500 to $1,000 each without interest.

During the year the dining room has been modernized and re-decorated.

Respectfully submitted,
VICTOR D. WASHBURN, M.D., Chairman

The report was accepted.

The President; Next is the report on Joint Council to Improve Health Care of the Aged.

REPORT OF THE JOINT COUNCIL TO IMPROVE THE HEALTH CARE OF THE AGED

The Joint Council to Improve the Health Care of the Aged is a joint endeavor of the Medical Society of Delaware, the Association of Delaware Hospitals, the Delaware State Dental Society, the Delaware Nursing Home Association and the Delaware Nurses' Association. It functions as an instrument of the organizations to find and act on health problems of the elderly that concern them all. By its By-Laws, it is non-political, and does not take stands on legislation.

Recently, the Joint Council has operated largely through a subsidiary corporation, the Joint Council for the Accreditation of Nursing Homes, Inc. This group, whose directors are the same as the organization representatives to the original Council, has operated a program of inspection, accreditation and recognition of superior nursing homes. Activities have been less this year because of the announcement of two national accreditation programs, one by the AMA and ANHA, the other by the American Hospital Association. Discussions which were underway with Blue Cross to recognize for payment purposes the local accreditation program have been dropped, presumably at least in part because of factors on the national level. Pending a clearing up of this situation, the present policy of the Joint Council is to continue to inspect nursing homes on request, but neither to promote new inspections or to require nursing home operators to pay for re-inspections until the significance of the local accreditation is better defined.

The present project of the Joint Council, referred to it by the Committee on Aging of the Medical Society of Delaware, is the exploration of need and possible means of expanding training programs from practical nurses and/or nursing home aides, particularly in Kent County and in Sussex County. It is felt that the type of course offered at Brown Technical High School in Wilmington might profitably be given in other places. The Council plans to explore this and other possibilities with potentially interested groups, including the State Board of Health and Delaware State College.

The accreditation program has produced some small revenue for the Joint Council, whose financial needs are small. It has not been necessary for the Medical Society or other sponsors to subsidize the Council this year. The Medical Society's representatives have been Victor D. Washburn, M.D., Allston J. Morris, M.D., and Mr. Lawrence C. Morris.

Respectfully submitted,
MR. LAWRENCE C. MORRIS, JR.

The report was accepted.

The President: Next are the Liaison reports: Delaware Cancer Society, Dr. Stern; Delaware Heart Association, Dr. Reinhardt; Mental Health Activities, Dr. Bush; Delaware TB and Health Society, Dr. Beatty; Delaware Vocational Rehabilitation Commission, Dr. Casscells, and Delaware Diabetes Association, Dr. Baganz.

LIAISON WITH DELAWARE DIVISION AMERICAN CANCER SOCIETY

A report on Delaware Division programs for the period Sept. 1, 1962 to Aug. 31, 1963:

PROFESSIONAL INFORMATION

Medical Affairs Literature

CA-JOURNAL FOR CLINICIANS—subscription to all physicians, osteopaths, schools of nursing and Visiting Nurse Association.

CANCER NEWS—subscription as above.

JOURNAL CANCER—to all hospital libraries and Academy of Medicine.

Delaware Academy of Medicine received publications and periodicals for Cancer Section of library in amount of $210.30.

9,470 pieces of medical affairs literature distributed to physicians, dentists, registered and practical nurses, and nursing students.

Displays—11 medical displays placed at meetings, hospitals, and nurses' workshops.

Visiting Lecturers

Dec. 8, 1962—T. Crandall Alford, M.D., Geo. Washington Univ. Hospital for Academy of General Practice

Apr. 3, 1963—S. Gordon Castigliano, M.D., American Oncologic Hospital, for Kent-Sussex Dental Society.

May 1, 1963—Cancer Institute for Nurses in Dover, Delaware, Dr. Rosemary Bouchard, New York University, Elizabeth Walker, Chief, Nursing Services, U.S. Public Health Virginia Barckley, National Nursing Consultant, American Cancer Society.

Conference for Physicians and Clergy held February 14, 1963

Films and Kinescopes—4 film showings for physicians

11 film showings for hospital staffs

50 film showings for nurses and nursing students

Scholarship—$400 awarded to Vida Swartzentruber, R.N. Instructor at Milford Memorial Hospital to attend course in oncological nursing at New York University and Memorial Hospital, New York.

PUBLIC EDUCATION

Business and Industry Program

36 companies had cancer education programs for employees.

Clubs and Organizations, Churches and Neighborhoods

29 film-speaker programs

Open Showings of Cancer Films at Theatres in "off" hours

2 Sussex County theatres showed the films Best Self-Examination and Life Story (on proctoscopic examination). Approximately 300 women attended.

Schools and Colleges

226 film showings to 30,659 students

Teen-Age Smoking Program—A conference on Smoking and Health for Senior High students held in Dover on January 26, 1963, sponsored by Heart, TB and Cancer. Delegates from 47 schools attended. A survey of schools indicated that 53 secondary schools had information on smoking presented either in classes or assemblies. The film "Is Smoking Worth It" was shown 178 times to 19,943 students.

Literature—67-200 pieces of education literature distributed. 113,950 pieces of Crusade literature with educational message distributed during April campaign.

Posters—482 posters placed.

Exhibits—State PTA Convention, Delaware State Educators Association, Delaware State Fair at Harrington, Del.

Scholarships—4 scholarships in amount of $500 each awarded at University of Delaware.

GRANTS-IN-AID

Renewal of grant for infusion study at Memorial Hospital, Wilmington. Harold S. Rafal, M.D., chief investigator.

$15,000 to Dr. Joseph Burchenal at Sloan-Kettering for research project on leukemia.

$10,000 to Wilmington General Hospital for new cobalt source.

PROFESSIONAL SERVICE

Doctors' Notification Program—for the period Sept. 1, 1962 to August 31, 1963 a total of 3,793 "Pap" smears were reported, making a grant total of 25,920 smears since February 1, 1959.

The Delaware Division contributed financially toward the cancer registries at Milford Memorial and Beebe Hospitals until June 30, 1963.

PATIENT SERVICE

	New Castle	Kent	Sussex	Total
New applications approved	105	11	30	146
Total patients assisted	148	18	54	220
Drugs supplied	28 pts.	7 pts.	25 pts.	50 pts.
Aid with hospital bills	18 pts.	5 pts.	8 pts.	31 pts.
Homemaker services	1 pt.			1 pt.
Transportation	3 pts.	3 pts.	4 pts.	10 pts.
Equipment from loan closet	32 pts.	3 pts.	1 pt.	36 pts.
Visiting Nurse Association	54 pts.			54 pts.
Dressings	54 pts.	8 pts.	14 pts.	76 pts.
Other*	4 pts.		6 pts.	10 pts.
Delaware Hospital Home Care	5 pts.			5 pts.
Room & Board—out-patient			3 pts.	3 pts.

*Colostomy, ileostomy, etc. equipment

Dressings

New Castle County distributed 52,417 dressings, 2,530 bed pads, 119 gowns; Kent County distributed 6,648 dressings; Sussex County distributed 10,440 dressings.

Respectfully submitted

O. N. STERN, M.D., Chairman

The report was accepted.

LIAISON WITH THE DELAWARE HEART ASSOCIATION

The Delaware Heart Association continues to supply all cardiovascular brochures, journals, and publications to the cardiovascular section of the Academy Library.

"Modern Concepts of Cardiovascular Disease" and "The Heart Bulletin" are supplied to all doctors requesting them. Outstanding speakers, latest films, and current literature are provided on request.

Surgical correction of cardiac anomalies are provided for the medically indigent patients through the Special Cardiovascular Clinics which also perform long term studies and follow up when indicated.

Seven hospital-based Rheumatic Fever Clinics supply prophylactic medication for medically indigent patients.

These services are supplied throughout the year to assist in better management of cardiovascular patients of Delaware by the Delaware Heart Association.

Respectfully submitted,
DAVID J. REINHARDT, III, M.D.

LIAISON WITH MENTAL HEALTH ACTIVITIES

The year 1962-63 has been a year of changes—changes of personnel and changes of concepts, some of which received much more pubicity than was warranted.

Because of staff difficulties and resignations, the Hospital for the Mentally Retarded had only one full time physician for a large part of the year. Toward the end of the year a new assistant superintendent was hired who will report for duty after July 1. Dr. Peter Peffer, who will be in charge of the Hospital for the Mentally Retarded, is an outstanding person in the field, and we can expect some real improvements in this institution program.

During the year the medical staff positions at Governor Bacon Health Center were all filled, and the care and treatment of the patients has improved considerably.

Plans were developed for the new Geriatrics Building to replace Black Cottage. A two level building is planned for a hillside near the Springer Building, with the two levels being connected by a two story section containing space for activity therapies. The upper level will be for semi-ambulant and infirm geriatric cases, and the lower level for ambulatory cases, each having 54 beds.

The Rehabilitation Building at Stockley was completed, dedicated and placed in limited use. It is expected to be in full use before the end of the year. Conferences have been held with the Division of Vocational Rehabilitation, and the use of the building will be coordinated with that state agency.

The cottages at Stockley are under construction, and a bill was introduced to provide 100 more beds of the same type. Requests were also made for funds to replace the main kitchen at the State Hospital, to construct a wing at the main building for the Medical Records and Medical Libraries, and to replace a temporary building housing employees. The legislature has not yet taken action on these bills.

Because of the difficulty in renting a proper place for the Dover Daytime Care Center for Severely Retarded Chlidren, funds were appropriated to construct a daytime care center in that area. It is under construction and should be available about the end of 1963.

There have been only two psychiatrists and two general practitioners who have taken advantage of the courtesy staff privileges offered to them in 1962. These privileges allow physicians to follow their patients while they are confined in the hospital and make regular visits to see them. It is hoped that more physicians will take advantage of this opportunity to become better acquainted with their State Hospital.

The American Psychiatric Association completed their State Survey and submitted their report and recommendations the last of March. A few weeks later a "10 Year Development Committee" appointed by the Board of Trustees of the Delaware State Hospital, was charged with reviewing the recommendations and making proposals to the Board of Trustees as to how the recommendations should be implemented. It was decided that one of the immediate goals should be the establishment of a Department of Mental Health, and a bill is being prepared to submit to the legislature. A number of the other recommendations have already been accomplished.

Early in 1963, a grant of $50,000 was reecived from the Public Health Service to set up a study program to develop plans for community based all-purpose mental health programs. Such units are to contain in-patient, out-patient, daytime care, night care, emergency services and rehabilitation services, and should preferably be adjacent to general hospitals that can supply other needed services. Dr. M. A. Tarumianz was appointed to be the Director of the Planning Study, and the investigation is proceeding.

The Mental Hygiene Clinic Program has expanded by the opening of a full time clinic in Wilmington, and plans are to establish a part-time clinic in Newark. Work on the construction of the administrative center for the clinics in Fernhook will begin this fall. Referrals to the clinics are steadily increasing, and the staff was recently expanded by the addition of a child psychiatrist.

Respectfully submitted,
CHARLES K. BUSH, M.D.

The report was accepted.

LIAISON WITH THE DELAWARE TUBERCULOSIS AND HEALTH SOCIETY

Statistics obtained from the Department of Vital Statistics of the Delaware State Board of Health indicate that up to October 1963 here has been a slight decrease in new tuberculosis cases diagnosed in comparison with the same period in 1962. In 1963—118 cases; in 1962—138 cases. At last count 559 residents were receiving treatment in the hospital or at home.

The mobile unit teams of the Society and the State Board of Health continue to lead the attack on the case detection front. Approximately 75,000 PFX x-rays are taken each year by the mobile units and at the Society. There is an increased emphasis being placed on tuberculin testing the pre-school child. The annual tuberculin testing program of the first grade children in the City of Wilmington has proven its worth. Starting in September 1963, this type testing will be done statewide on a co-operative basis with the private physician, the Department of Public Instruction, State Board of Health and the Society. The Society will furnish without cost the tuberclin test to the schools and also to the private physicians.

The migrant labor program is carried on as previously with increasing success. It may be that through the annual program one more source of infection may have been closed. This year there were less active cases of tuberculosis detected in this group. However, the coverage was just as intense as previously.

Another step in the detection program has been the setting up of an x-ray screening unit at the Correctional Institution. An x-ray is taken at the time of admission.

The fourth annual endowed lecture on some phase of respiratory disease, jointly sponsored by the Delaware Academy of Medicine and the Delaware Tuberculosis and Health Society will have Dr. Brian Blades, Professor of Surgery, George Washington University Medical School, present the paper. This is in keeping with excellent previous presentations.

The Society is increasing its work in the respiratory disease area through cooperation with the Pulmonary Function Laboratory of the Delaware Hospital. The treatment center at the Emily P. Bissell Hospital is receiving attention and support by the Society.

In line with the increased attention to the respiratory disease program, physicians are now receiving special designed information regarding the development and research in this area. The conference on Smoking and Health held for high school students is another step in prevention of respiratory diseases. This Conference was jointly sponsored by the American Cancer Society, Delaware Division, Delaware Heart Association and the Delaware Tuberculosis and Health Society.

The Society's activities include case detection, nursing care in cooperation with the Wilmington Visiting Nurse Association, rehabilitation nurses scholarships at the University of Delaware, research in pulmonary function, Parlett Gel Diffusion test as developed by Dr. Robert C. Parlett, Professor of Microbiology, George Washington University, "Drug Resistant Tuberculosis" by Dr. William Harris, Professor of Medicine, Woman's Medical Callege in Philadelphia.

Respectfully submitted,
GERALD M. BEATTY, M.D.

LIAISON WITH THE STATE BOARD FOR VOCATIONAL REHABILITATION

The Delaware State Program of Vocational Rehabilitation in the past year has expanded its services and has rehabilitated more persons in the year of 1963 than in any other year. New emphasis has been placed on the rehabilitation of the mentally disabled individual.

Of the 542 disabled persons rehabilitated, in 1963, 90% were unemployed at the time of referral. The average wage after rehabilitation of these individuals was $45.88 per week, which in the course of one year would amount to a total of $1,293,082. This sum, in addition to being of inestimable help to the individuals concerned is also obviously a boost to the state as well as the nation's economy. In the course of providing these services, $156,000 was spent which was by any means of calculation certainly money well invested. Once again Delaware ranked fifth in the United States on the basis of the number of rehabilitations per 100,000 population.

An especially important note is that the program for the mentally ill was greatly expanded during the past year with federal funds being matched by state appropriations. This program was initiated in April 1957 for in-patients at the Delaware State Hospital. A complete workshop is maintained there; and in addition, an economics department, with kitchen and dining equipment, facilities for sewing, and equipment for clerical training and typing.

The medical profession, of course, played a large part in the rehabilitation of these patients with $44,000 being paid for examinations, surgery, and other forms of treatment; and $30,000 for hospitalization.

The medical profession should feel justifiably proud of the excellent state rehabilitation service in Delaware, and of the part played by the numerous physicians in restoring these handicapaped individuals to a useful place in society.

Respectfully submitted,
S. WARD CASSCELLS, M.D.

The report was accepted.

LIAISON WITH THE DELAWARE DIVISION AMERICAN DIABETES ASSOCIATION

The American Diabetes Association and its affiliate, the Delaware Diabetes Association, have engaged in an active diabetes detection program in Delaware during the Diabetes Week in November of 1962, and an equally active program is planned for the week of November 17 of 1963.

In addition to this, a year-'round information program open to the profession and the public is maintained at the Academy office, and the detection program has been in progress for all members of organized labor during this year.

Several active meetings have been held by the Lay Society of the Delaware Diabetes Association including a Mother's Workshop group. The Delaware Diabetes Association was a co-sponsor with the Academy of Medicine and the New Castle County Medical Society of Dr. Emanuel Cheraskin in February of 1963. A similar guest speaker, Dr. Elaine P. Ralli, will speak during the coming year on the management of the young diabetic patients.

The affiliate in Delaware has been the active arm of the American Diabetic Association and has during the past year engaged in a limited fund-raising program to support its budget as the national organization is basically not a fund-raising organization but is supported by dues and small contributions.

One of the planned projects of the Organization has been the organization of a professional and lay affiliate group for the detection and education of diabetics in Kent and Sussex Counties to supplement the work of a similar organization active in New Castle County.

Respectfully submitted,
HERBERT M. BAGANZ, M.D.

The report was accepted.

The President: We will now hear the Report of the Nominating Committee and election of officers.

REPORT OF THE COMMITTEE ON NOMINATIONS

The Committee on Nominations has met and considered positions to be filled for the year October, 1963, through September 1964. We respectfully submit the following nominations:

Vice President—Robert L. Klingel, M.D.

Secretary—Joseph W. Abbiss, M.D.

Treasurer—Allen D. King, M.D.

Delegate to the American Medical Association — (January 1, 1964-December 31, 1965)—H. Thomas McGuire, M.D.

Alternate Delegate to the American Medical Association (January 1, 1964-December 31, 1965)— Leslie M. Dobson, M.D.

Delegate to the Delaware Academy of Medicine
Victor D. Washburn, M.D.

Trustees of Group Hospital Service, Inc.
William B. Cooper, M.D.
Edmund G. Laird, M.D.
Robert R. Layton, M.D.
Charles Levy, M.D.
H. Thomas McGuire, M.D.
Karl S. Russell, M.D.

Committee on Budget
Allen D. King, M.D., Chairman
John W. Alden, Jr., M.D.
Richard W. Comegys, M.D.
John C. Rawlins, M.D.
Charles W. Walker, Jr., M.D.

Committee on Medical Education
Leonard P. Lang, M.D., Chairman
Olin S. Allen, II, M.D.
Leslie M. Dobson, M.D.

Committee on Program
James Beebe, Jr., M.D., Chairman
Lewis B. Flinn, M.D.
Lawrence M. Baker, M.D.

Committee on Public Laws
William O. LaMotte, Jr., M.D., Chairman
Rhoslyn J. Bishoff, M.D.
J. Leland Fox, M.D.
John J. Lazzeri, M.D.
William J. Vandervort, M.D.

Committee on Publications
A. Henry Clagett, Jr., M.D., Chairman
Joseph W. Abbiss, M.D.
M. A. Tarumianz, M.D.

Nominees to the Board of Medical Examiners
James Beebe, Jr., M.D.
Andrew M. Gehret, M.D.
Eugene R. McNinch, M.D.
Benjamin F. Burton, Jr., M.D.
Rhoslyn J. Bishoff, M.D.
John A. J. Forest, Jr., M.D.
James B. McClements, M.D.
Eugene R. Mercer, M.D.
George R. Spong, M.D.
Henry V. P. Wilson, M.D.

Respectfully submitted,
Floyd I. Hudson, M.D., Chairman

As there were no nominations from the floor, a motion was made, seconded and carried to accept the report.

The President; The next order of business is New Business, and first we will take up Resolutions. These resolutions are presented in the order of their receipt.

RESOLUTION NO. 1

This Society endorses the current efforts being made by the AMA to establish closer relationships with the N.M.A.; such as the recently organized joint committee and endorses nomination of Negro AMA members for membership on AMA comittees.

Although racial discrimination in hospital staff appointments or membership in medical organization does not exist in Delaware, this Society disapproves of such practice wherever it does exist.

RESOLVED, that the Medical Society of Delaware approves all efforts by the AMA to discourage any racial discrimination which may exist among its membership.

BE IT FURTHER RESOLVED, that a copy of this resolution be sent to the Executive Vice President of the AMA, F. J. Blasingame, M.D.

REPORT OF THE REFERENCE COMMITTEE ON RESOLUTION 1

This resolution would place the Society on record as opposing racial discrimination within the A.M.A. Your committee is in complete sympathy with this objective, and recommends the adoption of the resolved portion of this resolution.

The report was accepted.

RESOLUTION NO. 2

Resolution to amendment of the By-Laws concerning Committee on Education.

WHEREAS, the continuing education of the practicing physician in the advances of medicine is increasingly important, and

WHEREAS, it is desirable that the broadest possible representation within the Medical Society of Delaware be brought to bear on the subject, and

WHEREAS, Article XII, Section 9, of the present By-Laws of the Medical Society of Delaware is restrictive, in that it limits the number of members of the Committee on Education and does not make possible adequate representation of the varying needs within this state, therefore be it

RESOLVED, that Article XII, Section 9, be deleted from the By-Laws of the Medical Society of Delaware; that Section 10 be renumbered "Section 9;" and that Section 11 be renumbered "Section 10;" and that the phrase (4) Committee on Medical Education" be deleted from Article XII, Section 1; and that subsection (5), Article XII, Section 1, be renumbered (4).

REFERENCE COMMITTEE REPORT ON RESOLUTION NO. 2

This resolution would have the effect of placing the composition of the Committee on Education at the discretion of the President. This would allow broader and presumably more representative participants in the Society's educational efforts. Your committee considers this a desirable result and recommended the passage of this resolution.

The report was accepted.

RESOLUTION NO. 3

Be it resolved,

That the Medical Society of Delaware go on record to the effect that smoking can be a hazard to health.

REPORT OF REFERENCE COMMITTEE ON RESOLUTION NO. 3

This resolution would place the Society on record as believing that cigarettes have the potential to damage health. Your committee believes that this is an affirmation of a generally accepted medical fact, and recommends adoption of this resolution.

The report was accepted.

RESOLUTION NO. 4

That the Medical Society of Delaware go on record as recommending to the hospitals in the State of Delaware that they discontinue the sale of cigarettes and tobacco products.

REPORT OF REFERENCE COMMITTEE ON RESOLUTION NO. 4

This resolution would have the effect of placing the Society in a regulatory position. The committee believes that it is within the province of the Society to point out the potential hazard of cigarettes, but that, having done this, it has no duty nor is it consistent with the policy of presuming each individual competent to make his own decisions when in possession of the facts, to regulate the habits of the individuals. Your committee does not believe that passage of this resolution would serve any constructive purpose, and recommends that it be not adopted.

The report was accepted.

RESOLUTION NO. 5

That the Medical Society of Delaware discontinue advertising cigarettes and cigarette products in the Medical Journal unless the said advertisements contain the clause that "smoking may be detrimental to health."

REPORT OF REFERENCE COMMITTEE ON RESOLUTION NO. 5

This resolution would prohibit cigarette advertising in the Delaware Medical Journal unless the ad pointed out the potential hazard of smoking Your committee points out that the Journal is a closed circulation publication, whose readership is for practical purposes confined to people trained in medical science or with ready access to authoritative medical information. It would seem to serve no purpose to place such a clause in a tobacco advertisement read by this audience. Your committee recommends that this resolution be not adopted.

The report was accepted.

RESOLUTION NO. 6

Whereas (1) the use of animals in research is essential; (2) for research to be effective there must be good care and froper use of animals; (3) provision for animal welfare is incorporated in our state laws; (4) care of animals is generally good and can be improved where necessary by voluntary actions that entail (a) standards, (b) surveys, (c) accreditation; (5) a task force on care of laboratory animals is already in the process of studying any problems which might exist in this connection and is planning a convention of agencies having potentially or actually programs for survey or accreditation of laboratory animal care facilities, the purpose of the convention being to develop fully voluntary methods for survey or accreditation of animal care facilities; (6) federal regulatory legislation in any form is not needed and would be harmful.

Be it resolved that the Medical Society of Delaware make known its strong objection to impending federal legislation which may seriously impair medical education and research. That while the legislation in question is introduced in order to insure humane care for animals used in research undertaken by federal grants, and while it is realized that the sponsors of this type of legislation have as their only object the prevention of unnecessary suffering by laboratory animals, it is the conviction of this society that the legislation in question would establish a government agency to police medical research in an undesirable fashion, would restrict experiments involving living animals to situations where no other feasible and satisfactory methods can be used, would require certification of individuals applying for grants prior to the awarded grants, would require maintenance of such records and tests performed as to greatly increase the cost of research and interfere with the resarch out-put of the investigator, and with such other restrictive and specifying requirements as to impede rather than help the cause of the promotion of human health and alleviation of human suffering throughout the world. That the executive office of this society be instructed to prepare in detail its specific objections to the legislation in question including HR 4856, HR 4620, S533, anad S1041, so that these objections might be known and understood by the community served by this society and by Delaware's representatives in the Congress of the United States and such other key legislators concerned with this type of legislation.

REPORT OF THE REFERENCE COMMITTEE ON RESOLUTION NO. 6

This resolution opposes Federal regulation of animal care in laboratory and research activities. As is pointed out in the resolution, Delaware, in common with most other states, has legislation upon which proper care of animals can be based and enforced. Your committee believes that no legitimate purpose would be accomplished by Federal regulatory activity in this field, and recommends the adoption of the resolution.

The report was accepted.

RESOLUTION NO. 7

The undersigned wish to present the folowing resolution for the consideration of the House of Delegates at its annual meeting on October 13, 1963.

Resolved that the Medical Society of Delaware undertake the necessary steps which would lead to introduction and passage of a legislation which would make it possible for physicians to incorporate their practices. Similar legislation has been already passed in a number of states.

REPORT OF THE REFERENCE COMMITTEE ON RESOLUTION NO. 7

This resolution proposes to have the Society introduce and support legislation authorizing the incorporation of a medical practice. This is a source of considerable concern to the committee. On one hand, we do not wish to prohibit incorporation to those who want it. On the other hand, their are many reasons to believe that physicians would be unwise to incorporate their practices until this whole area has been much better definied by the Tax Court. There is, for example, not a single decision of the Court upholding the validity of employee benefits under such incorporation except for the Kintner case, which in the opinion of attorneys, is not particularly extensible to the majority of these situations. The committee is concerned at the prospect of the Society's urging this upon the legislature while at the same time advising its members that there are many good reasons not to incorporate. The Committee recommends that no action be taken on this resolution, but that the Council be instructed to investigate this matter with competent legal help, and to pursue such legislation if it seems to become desirable.

The report was accepted.

RESOLUTION NO. 8

Resolved that the Medical Society of Delaware institute and support legislation and/or regulatory measures which would require motor vehicles to be equipped with devices eliminating or decreasing exhaust fumes.

REPORT OF REFERENCE COMMITTEE ON RESOLUTION NO. 8

The committee is in sympathy with the intent of this resolution. However, a brief investigation discloses doubt that a device exists which is both practical and relatively inexpensive to accomplish this purpose. Therefore, we recommend that the resolution be amended by the addition of the words: "when and if it is demonstrated that suitable device is available."

The report was accepted.

RESOLUTION NO. 9

Dr. Cannon: A resolution that the House of Delegates recommend to the Legislature that a bill be passed requiring the installation of seat belts as a health and accident prevention method in all motor vehicles by January 1, 1965, to be referred if there is any question, to the Public Laws Committee with the support of this body.

The resolution was accepted.

The President: We have a communication from the President of the Delaware State Nurses Association requesting cooperation and the implementation of the new nursing code.

The President; At this period in the meeting of the House of Delegates it is customary to recognize the deceased members during the past year. I would like the members of the House of Delegates to rise and remain silent for a moment in memory of the following:

James Beebe, Sr., M.D.
Virgil A. Hudson, M.D.
Harrison L. Manning, M.D.
Jerome D. Niles, M.D.
Thomas L. Watson, M.D.

(The members of the House of Delegates then stood in a moment of silence.)

The President: The next item is the selection of the site for the 1964 annual meeting. The bylaws specify Sussex County unless the House of Delegates decides otherwise. Sussex County is most anxious to have the meeting and would like to hold it there in September because of the availability of the facilities at that time in Sussex.

The President: If there is no other business before the House of Delegates, we will entertain a motion for adjournment. A motion was made, seconded and carried to adjourn the 174th Annual Session of the House of Delegates, Medical Society of Delaware at 4:55 o'clock p.m., Sunday, October 13, 1963.

The complete report of the Proceedings of the House of Delegates is on file in the Medical Society office and is available to members for reference.

DELAWARE ACADEMY OF GENERAL PRACTICE

(*Continued from Page 36*)

peutics, Practice of Medicine and Pediatrics. The results are submitted to the Medical Council in an official report signed by the President, Secretary, and each member of the Board.

To the successful applicant the Medical Council issues a Certificate of Registration as a practitioner of Medicine and Surgery in this state upon payment of a fee of $15.00. In the case of failure of any examination the candidate after expiration of one year and within two years, has the privilege of a second examination without the payment of an additional fee.

For the purpose of correcting and revising the register of legal practitioners of Medicine and Surgery, as kept by the Medical Council, each person to whom a certificate and registration to practice Medicine and Surgery in this state have been granted and who desires to continue in the practice of his profession, shall procure from the Medical Council annually, on or before the 30th day of June, a renewal certificate of registration and pay a fee of $15.00 to the Medical Council, effective June 23, 1961.

While the fee for re-registration was started in 1961, we fail to understand why it was found necessary to impose such a fee to re-register with the council since it is mandatoy for physicians to register annually by paying a license fee to the city, the state, and the Internal Revenue Narcotic Department.

This Council re-registration fee appears discriminatory and superfluous since many other professional groups are not required to do this annually.

Attention is called to the fact that although one third of the physicians in Delaware are General Practitioners, only one such (Dr. Spong) is a member of the Board of Examiners.

With the growth of the Medical Society of Delaware and the availability of many qualified physicians with certification, training, and background in teaching in the medical sciences, it is the opinion of many members of the Society that the Board membership can be varied and so arranged as to give some relief to those who have served faithfully for many years by recruiting new members to give their services to the Medical Council as members of the Board of Medical Examiners.

Respectfully submitted,
George J. Boines, M.D.
R. J. Bishoff, M.D.

Auxiliary Affairs

NATIONAL FALL CONFERENCE IN REVIEW

"You are a full partner with your doctor-husband in the promotion of American medicine!" was the thought-provoking statement which greeted us at the opening session of the National Fall Conference in Chicago, October 6-9, 1963. Throughout the four day conference, every officer, chairman and speaker made us more and more aware of the tremendous responsibility we share with our husbands. The future of American medicine is in the balance; we, as doctors' wives, working with and for our husbands, have it within our power to tip the scale.

"We are attracting and holding less than half of our potential membership," we were told by Mrs. Earl W. Roles, one of the vice presidents in charge of membership. This, of course, is a national picture and may not apply to us, but it was shocking to think that more than half of our doctors' wives in the United States do not belong to, nor work for, the organization which is dedicated to aid and assist their husbands. Why is this? Everyone is busy, we say; but we always seem to find time for the things we want to do. Therefore, it must be that we don't "sell" Auxiliary as we should within our own communities. We should emphasize the helpmate angle; make every doctor's wife feel that she owes it to her husband to work for his best interests. We were encouraged to enter into community affairs, but warned to let the deeds speak for themselves—to avoid attracting attention to the "doer." "Serve and Communicate" is the theme chosen by our national president, Mrs. C. Rodney Stoltz. The "Serve" is first; the "Communicate" (or publicity) is only a by-product. Whether we like it or not, whether we try or not, we are a public relations entity of the medical society. Public relations can be good or bad; let's make ours good!

With the next year an election year, medical legislation becomes more and more important to us. To aid us in a truer understanding, Dr. Jack Schreiber, a member of the AMA Speakers' Bureau, discussed the Medicare (or as Dr. Schreiber dubbed it, the Fedicare) Issue. "A federal government plan for care of the aged is simply not needed in this country," he pointed out. "The United States already outperforms any medical care in the world—why change? Our aged are not poor and sick; does anyone you really know go without adequate medical care because he can't afford it?", Dr. Schreiber asked. In many respects, the older people of this country are better off than any other age group. Every unbiased survey of their financial status confirms this fact. Their liquid assets are twice as high on the average as those of younger families. They have fewer family obligations, less debt, more homes mortgage free and they enjoy special tax advantages. A compulsory program such as the King-Anderson Bill, which gives help to everyone, regardless of need, would be a great burden to already heavily taxed citizens.

We could expect a 16% increase in taxes for those individuals earning $100.00 a week or more; by 1966 this figure would rise to 30%. Even so, the King-Anderson Bill pays for hospital expenses only; no allowance is made for special nurses, surgery, drugs or doctor's fees. Dr. Schreiber went on to state that medical care for the aged has become a gimmick to win votes. Let us, as Auxiliary members, take the responsibility of informing ourselves concerning medical legislation, and after being informed then do our best to inform others. Our medicare system is the envy of the world! Let's keep it that way!

Information for this article is from "Medical Auxiliary News", Official Publication of The Woman's Auxiliary to the Kansas Medical Society, written by Mrs. Edith Lessenden, President Elect, reprinted from the November-December 1963 Bulletin.

Delaware Medical Journal

MARCH, 1963

NUMBER 3

VOLUME 36

THE CIGARETTE SMOKING PROBLEM

• Cigarette smoking has recently received widespread government publicity and the large national voluntary health organizations have joined the U.S. Public Health Service in publicizing the hazards of cigarette smoking. Physicians will represent the ultimate personal contact with patients and must be well informed.

JOHN B. FLICK, JR., M.D.

There is a need today to collect and organize our thoughts and sift through the vast amount of data which has accumulated regarding the hazards of cigarette smoking. Physicians particularly will be consulted by patients who want facts regarding the dangers of the cigarette habit and they should be well informed. It is therefore timely to review and document data long known but rarely collected in one place.

One can hardly watch television or read a a popular magaine without seeing an advertisement of a renowned athlete lighting up a cigarette, stressing the manliness of the habit or relating it to nature, outdoors, cleanliness, or femininity. If this isn't enough propaganda to confound our youth, they usually find their parents smoking and setting an example at home—and yet telling their children "*not to smoke.*"*!* Since the smoking habits of parents are directly reflected in their children,[1] is it any wonder that almost 60%[2,3] of all high school students are smoking at the time of graduation? Is it not natural for youth to try and appear sophisticated, grown up, and copy their admired elders?

The statistics regarding cancer of the lung are alarming. Approximately 40,000 deaths per year[4] now result from this cancer annually in the U.S.A.—about equal to deaths from auto accidents! And, adjusting statistically for the increasing population and the increasing average age of the population, cancer of the lung remains *almost the only cancer* steeply increasing in incidence per 100,000 of population! Dr. Alton Ochsner[5] estimates that by 1983 cancer of the lung will account for more than 40% of all cancer deaths! This is already true on the Isle of Jersey where cigarettes are not taxed.[6]

Physiological Effects Of Smoking

Vascular:

It is a simple matter (with a thermocouple attached to finger tips) to prove that smoking results in arterial vaso-constriction peripherally. And it is well documented that this same effect occurs in the coronary vessels, in the retina,[7] (causing dimness of vision),

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Dr. Flick is Attending Surgeon, Bryn Mawr Hospital, Bryn Mawr, Pa., Consultant in Thoracic Surgery, Veteran's Administration Hospital, Wilmington, Delaware.

and in the placenta of the gravid uterus. For many years physicians have advised patients with coronary and peripheral vascular disease to stop smoking, and recently studies of heavily smoking pregnant women[8] suggest that there is an increase in prematurity, small babies and congenital abnormalities in their offspring as compared with a similar group of non-smoking pregnant women.

The American Heart Association and the U.S. Public Health Department have officially recognized statistical evidence indicating an increased incidence of heart disease and a decreased life expectancy in heavy smokers (over one pack of cigarettes daily). The vascular effects of heavy cigarette smoking are significant factors in many vascular disorders, essential hypertension, coronary artery disease, and congenital anomalies of the new-born.

Digestive:

Cigarette smoking stimulates intestinal peristalsis and gastric motility. It has been clearly shown that it also increases gastric acid formation, probably through vagal stimulation.[7] On the basis of this knowledge patients with peptic ulcer, ulcerative colitis, irritable bowel, etc., are advised to avoid smoking.

Respiratory:

The most important and thoroughly studied effects of cigarette smoking is upon the respiratory tract. The protective cilia which line the respiratory tract from the larynx to alveoli and continually beat outwards to clean out foreign material and mucus are quickly paralyzed by tobacco. The glands lining the respiratory epithelium, irritated by the products of tobacco combustion and the heated smoke, secrete abnormal quantities of mucus. In addition it can be easily shown by biopsy[9] that the respiratory epithelium—usually only one cell layer thick—thickens in proportion to the years of smoking and amount of cigarettes smoked, finally showing a squamous metaplasia and complete absence of cilia. Pulmonary physiological measurements in smokers and non-smokers clearly show that these anatomical changes also result in functional impairment.[10]

Is it surprising that a heavy cigarette smoker has a "smoker's cough," is abnormally short of breath, and eventually develops an increased incidence of chronic bronchitis, emphysema, and cancer of the lung? Is it surprising that athletic coaches note that this habit of smoking reduces the ability of the athlete to compete with non-smokers? Man could hardly devise a better way to undo nature's defenses than to circumvent the nose and pass hot dry air containing foreign and irritating substances directly into the lung! Many cigarette manufacturers even add an anesthetic acting substance to their product, menthol, further enhancing paralysis of protective cilia.

The "cause" of lung cancer has been the subject of profound studies by the tobacco industry and many non-partisan scientists. Tars, arsenic, partial combustion products and many other substances have been suspect and many attempts have failed to produce lung cancer in experimental animals.

Chronic prolonged irritation of the skin by exposure to sun has long been recognized as important in skin cancer (known to be more frequent in people of outdoor occupations and in southern latitudes). Chronic prolonged cervicitis after childbith has long been considered important in predisposition to cancer of the cervix and treatment of cervicitis has decreased this cancer. Chronic prolonged bladder irritation from toxic agents, such as benzene products, etc., has been recognized as causative in some bladder carcinomas. Chronic prolonged irritation of the colon in ulcerative colitis and polyposis has long been recognized as important predisposing factors in carcinoma of the large bowel.

Is it not reasonable to expect an increased incidence of cancer of the lung in prolonged chronic irritation of the respiratory tract from smoking? Are we distracting ourselves from the main item by hunting for a single "cause?" Could we produce lung cancer in the human by prolonged chronic irritation of the respiratory tract by placing our heads over the backyard incinerator long enough to simulate the situation in cigarette smoking? This type of prolonged chronic irritation in the lip, the cervix, the large bowel, the skin, and the bladder has been recognized as causative of cancer, and, in the lung, squamous metaplasia and carcinoma in situ has already been noted by Auerbach, et al[9] in heavy smokers. Furthermore, the stopping of smoking has been shown to reduce the incidence of lung carcinoma! From a practical standpoint, reduction of this serious disease and other chronic respiratory diseases can be brought about *merely by stopping cigarette smoking*! Need we wait until *a single agent* can be produced and the disease duplicated exactly in the laboratory, before we apply knowledge already available?

Summarizing the effects of heavy smoking on the resipiratory tract, it can be readily shown that cilia are paralyzed, mucus increased and the alveolar membrane across which oxygen must diffuse is greatly thickened, all factors causing dyspnea, chronic bronchitis and emphysema, and chronic irritation possibly leading to squamous metaplasia and ultimately carcinoma of the lung. While the statistics do *not* tell us the *mechanism* and *cause* of these changes and diseases, they do show us that non-smokers are less frequent victims. Do we need more to apply this knowledge? Even though only one in 10 or 20 heavy smokers for many years will ultimately develop cancer of the lung, all will have increased mucus, thickened mucosa and alveolar membranes, and paralyzed cilia — causing dyspnea, a chronic bronchitis, and premature and aggravated emphysema. All of these changes (up to metaplasia) are reversible with the cessation of smoking!

As physicians, let us direct our efforts to education of the public about the health hazards of cigarette smoking. It has been estimated that at least 85% of all lung cancer could be eliminated if there were no cigarette smoking and that one million of today's smoking children will eventually become lung cancer victims. Even if lung cancer and other diseases were not the penalty that millions of these smoking children will eventually pay, being saddled with a lifetime habit before they have the necessary maturity and judgment to decide for themselves about the dangers involved is a matter which should concern all parents and physicians.

Smoking in physicians has decreased markedly because of the awareness of the hazards of this habit.[11] Let us broadcast the recognized facts and educate school children regarding the hazards so that they have the chance to make a sensible decision before choosing to smoke. This information was not available when their parents began smoking! It is available today!

It is hoped that our magnificent free enterprise system will promote good health habits by education, not legislation, and that physicians will lead the way by teaching and good example.

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CLINICAL NOTICES AND MEETINGS

An invitation has been issued to the members of the Medical Society of Delaware to attend the 37th Annual Spring Congress in Ophthalmology, sponsored by Gill Memorial Eye, Ear and Throat Hospital, April 6-9, 1964, in Roanoke, Va.

The American College of Physicians, holding its 45th Annual Session in Atlantic City, April 6-10, will include rounds of scientific education, the induction of 400 physicians to Fellowship in the College, and presentation of ACP Annual Awards to men of distinction in medical science.

EXERCISE AND THE HEART

• Cardiac output, stroke volume, blood pressure and coronary circulation are all acutely changed by exercise. The changes are of critical importance for persons with coronary disease.

L. Theodore Lawrence, M.D.

Coronary heart disease is responsible for about one-third of all deaths in this country according to a recent article by Moyer[1] in this journal. It is not only a common cause of death in middle and old age, it is a disease that begins in youth.

To account for this prevalence several explanations are apparent. The first is suggested by the observation that ten times as many persons die of coronary disease in this country as in Japan where the diet is extremely low in animal fat and the blood lipid level is low. Secondly, it is popularly thought that our particular variety of emotional stress predisposes to coronary disease, possibly by way of an increase in blood lipids and an increased clotting tendency. A third consideration, which involves as yet relatively little scientific evidence, is the relation of exercise to coronary insufficiency.

Morris[2] has shown that London bus drivers have more coronary disease than conductors who are physically more active. The difference is slight but the exertion required of the conductors is perhaps not nearly as great as might be desirable for optimal results. It has been found that endurance athletes have moderately hypertrophied hearts and their major coronary arteries are correspondingly large.[3] In this situation a given amount of atherosclerosis will cause a less significant amount of obstruction than in the average heart. The effects of exercise on lipid metabolism and the possible emotional tranquilizing effect are other factors yet to be fully evaluated.

Dr. Samuel A. Levine, in the July, 1963, *Atlantic*, expressed a conservative viewpoint in the question of exercise, stressing the obvious adverse effects on those with angina pectoris or impending congestive heart failure. He discussed the widespread occurrence of "silent" coronary disease and mentioned cases of sudden death in men who had been shoveling snow. He further pointed out that many individuals will rightly begrudge the time required for a significant exercise program. He advised caution in recommending for adults exercise to which they are not accustomed.

Dr. Paul D. White, in the October, 1963, issue of the *Atlantic* showed a more liberal attitude. He suggested that for every man who dies while shoveling snow many others will exercise with great benefit. Taking the calculated risk may be worthwhile.

Follow-up studies[4] on a group of college athletes showed that they did not live longer than average and many died of coronary disease; but among those who continued strenuous physical activity there were no coronary deaths.

The present article will first review some of the available information as to the quantitative effects of exercise on the normal circulation and then will give some comments

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TABLE I

	Blood Pressure	*Calories per Minute*	*Cardiac Output (lit. per min.)*	*Oxygen Uptake (cc. per min.)*	*Stroke Volume (cc.)*	*Heart Rate*
Rest	133/70	1	5	250	70	72
Exercise	169/60	8	14	1500	100	140

Approximate figures showing the estimated circulatory characteristics of a 40 year old man doing a standard two step exercise test.

on the application of this to the prevention and management of coronary disease.

Effects Of Exercise On The Normal Circulation

First of all it should be understood that the desired experimental data are not easy to acquire. The difficulty of determining representative resting blood pressure readings in ordinary persons is well appreciated. It is even harder to obtain information on individuals during strenuous exercise. Measurements of cardiac output and stroke volume depend on relatively new or uncertain procedures such as the Fick method, indicator dilution studies, and vascular cannulation or catheterization.

As an example of the effects of exercise the hypothetical figures of Table 1 are presented. These are based on data from several reports of exercise studies[5-8] and are intended to apply to a man of average size.

Several factors are important in bringing about an increase in cardiac output.[9] The heart rate increases as a result of changes in the autonomic nervous control. Secondly, there is an increased force of myocardial contraction caused largely by sympathetic influences which may be both humoral (from the adrenal glands) and neurogenic. This accounts for more complete systolic emptying and an increase in stroke volume.

It is to be stressed that, while Starling's Law of the Heart implies an increased diastolic volume of the ventricles prior to an increase in stroke volume, the exercise situation corresponds to an adrenalin effect, with increased stroke volume depending on increased systolic emptying rather than a greater diastolic filling.[10]

Extensive studies have been done to determine the degree and importance of a change in stroke volume during exercise. Rushmer thought,[11] on the basis of dog experiments, that a variation in heart rate accounted for most of the change in cardiac output. Others have found evidence of a considerable change in stroke volume. The situation is complicated by the fact that the stroke volume also varies with posture,[9] being greater in the reclining position, so that the stroke volume of a man at rest in a supine position may be similar to that in the upright position during exercise.

The most readily available evidence for an increase in stroke volume during exercise is the increase in pulse pressure which may be easily verified in any normal person. A champion athlete showed a change in blood pressure from 142/80 to 210/30 on strenuous exercise.[12] To interpret such a change, an estimate of stroke volumes may be made using the Starr formula[13] which states that:

$$SV = 93 + .54 \times PP - .47 \times DP - .61 \times Age$$

(SV=stroke volume, PP=pulse pressure, DP=diastolic pressure). The blood pressure to be used in this formula is to be obtained by sphygmomanometer. Using this method it can be estimated that the stroke volume of the above mentioned athlete increased from 73 cc. to 161 cc. This formula was derived from autopsy experiments in which various volumes of fluid were discharged into the arterial system and the resultant pressures observed.

An additional important adjustment to exercise is an increased extraction of oxygen from the arterial blood. The mixed venous blood oxygen content may be reduced to about half that found in the resting state.

The following approximate figures are useful to keep in mind. An average person uses about 250 cc. of oxygen per minute under basal conditions and expends about one calorie of energy per minute. On exercise, the cardiac output increases about 1.5 liters per minute for each increase of one calorie per minute of energy expenditure, or 6 liters per minute for each 1000 cc. increase in oxygen uptake.[7] Cardiac output may rise to more than five times basal level and oxygen uptake to well over ten times basal level.[14] The maximum effective heart rate is about 180 beats per minute.[11]

In general, the work performed is proportional to the oxygen uptake except that a certain oxygen debt may accumulate. This may be significant even at low levels of work in those with abnormal hearts and 20% to 50% of energy production may be based on accumulating oxygen debt.[8] A trained athlete, on strenuous effort, may accumulate an oxygen debt of three liters.[12]

The ordinary response to exercise may be improved by athletic training. It is only in highly trained individuals that maximum oxygen uptakes are observed. In these the heart tends to be moderately hypertrophied, showing an enlarged silhouette on x-ray and an increased weight when an autopsy examination is done.[3,10,15,16] The heart rate tends to be slow and the stroke volume large, even at rest. Some other changes have been attributed to training: increased tolerance to a low blood pH,[10] increased economy of muscular activity, increased extraction of oxygen from the circulating blood, hypertrophy of the respiratory muscles, and improved regulation of blood flow so that a maximum flow goes to the muscles. During effort the electrocardiogram may show an increase in the height of the R waves of 7% and of the T waves 35%.[9]

Conversely, the circulatory reserve deteriorates in a person at bed rest, with an average resting pulse increase of 3 beats per week.[10]

Another factor in adaptation to exercise is an emotional one.[17,18] An anxious person (neurocirculatory asthenic) overreacts to exercise with an excessive heart rate and cardiac output. His endurance is reduced. A depressed person underreacts. A successful athlete presumably will react in an optimal way. The importance of this factor is illustrated by the observation that a surgeon, while operating, may have a cardiac output greater than that of a man walking fast.

Coronary Physiology

The work of the heart at a given time is indicated by the mean blood pressure and the cardiac output.[19] The efficiency with which the heart does this work is shown by the myocardial oxygen uptake in proportion to the work.[20] Since myocardial metabolism is almost entirely aerobic,[21] the coronary circulation must supply oxygen in proportion to the work and efficiency of the heart. A failing heart is less efficient; it does less work for a given expenditure of oxygen.[22] A ready explanation for this is given by the Law of La Place which indicates that, as the heart dilates, the myocardial wall will have to generate increased tension to maintain a given blood pressure.[22] In addition to this there may be less obvious reasons of a biochemical nature for oxygen wastage in disease. The failing heart will often maintain the mean blood pressure but will show a small stroke volume, narrow pulse pressure, and low cardiac output. In particular, a failing heart will not show a normal increase in stroke volume on exercise.[8,23]

Normally coronary flow is highly variable, being proportional to the oxygen requirement of the heart. Anoxia is probably the most important stimulus to coronary dilatation and increased flow. The hearts of persons who have lived at high altitudes show an increased vascularity.[24] The effect of practicing breath holding, as done by Zatopec,[12] the marathon runner, has not been determined.

Coronary Disease

The most important coronary atheromas are those that develop in the first portions of the main coronary arteries. Even though such lesions may completely occlude one of these vessels it is possible for collateral circulation to develop and adequately compensate for the occlusion.[25,26] Such collaterals are commonly found in coronary disease but they may be absent in patients who die suddenly with their first coronary attack, there having been too little time and stimulus for collateral growth.[27]

Of great interest is Eckstein's dog experiment[28] in which collateral circulation was encouraged by partial occlusion of one coronary artery. The dogs were then exercised on a treadmill twenty minutes, four times a day, for several weeks. Subsequently the same coronary was completely ligated and the blood flow, through collateral vessels, to the segment beyond the ligature was measured. The flow was considerable and was much greater than in control dogs that had not been exercised.

The human equivalent of this amount of exercise has not been determined but it has been asserted that this kind of benefit will not be obtained from exercise in which the heart does not attain a rate of at least 150 beats per minute.

In considering the recommendations of strenuous exercise to a middle aged man who undoubtedly has some early coronary disease it is reassuring to remember that exercise tests, such as the Master two step test, have been widely used with very rare ill effects and that most myocardial infarcts occur "fortuitously" with no apparent relation to exercise.[29]

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TREATMENT OF ORAL CANCER

(*Continued from Page 62*)

tongue a combination of Roentgen therapy and interstitial radiation rather than surgery is indicated.

In cervical lymph node metastases, neck dissection is the method of choice in all operable cases. In situations where cervical metastases are inoperable, or where operation is not indicated due to the presence of an inoperable primary lesion, a program of radiation therapy should be employed to restrict growth and inhibit further spread.

No formula has yet been devised which will evaluate all the features of the tumor and patient and indicate the best treatment. The final choice rests on judgment based on a knowledge of all forms of treatment for this disease. The location of these lesions means that neglect will either require mutilating operations to effect cure or the involvement of vital structures will make operation impossible. Early diagnosis and early treatment must be applied at the earliest possible moment. Only in this way can we hope for marked improvement in the treatment of oral cancer.

THE SURGEON AND THE DIABETIC

- **The well controlled diabetic can be operated on safely but acidosis increases the morbidity following operation. The author believes premedication should be minimal.**

Mostafa Sherafat, M.D.

If the disease is under control, necessary and well-conceived elective surgery can be performed with predictable and acceptable risk. Stress, physical and emotional, will augment the problem of management of diabetes mellitus. Trauma, soft tissue and skeletal, causes the diabetes to become more severe. If the patient is a known diabetic, the surgeon is alerted to this problem, and he and his patient will be less likely to be harassed by the development of complications which elective operation or superimposed disease may precipitate. In latent or undiagnosed diabetes, unrecognized augmentation of the diabetic state can become a serious problem. Under the stress of injury, elective operation, or intercurrent disease, clinically apparent diabetes may develop. The sooner this is recognized and properly treated, the lower the morbidity and mortality will be.

Certain screening tests should always be a part of the patient's routine work-up. The urine should be tested for sugar; glycosuria means diabetes until proven otherwise. Postprandial blood sugar has a high degree of specificity: a venous blood sugar of 170 mg/100 cc or capillary blood sugar of 200 mg/100 cc means that diabetes is present. More detailed provocative tests are indicated when circumstances suggest latent diabetes. The most commonly used is the standard oral glucose tolerance test, with or without Cortisone.

It is well established that certain diseases occur more commonly in the diabetic. For example, cancer in general occurs about one-third times more often in the diabetic than in the general population, and cancer of the pancreas is 2.5 to 3 times as common. Gallstones and Dupuytren's contracture have a higher incidence. If there is a surgical lesion characteristic of diabetes mellitus, it is more a quantitative than a qualitative one.

There are certain broad basic components recognizable in this clinical phenomenon: the diabetic's poor or absent pain response, the increased frequency and severity of infection, and the ease with which small artery thrombosis with subsequent gangrene will develop, either as a result of trauma or spontaneously. In varying degrees these three basic factors will contribute to the surgical problem, and there influence must be appreciated if proper evaluation and treatment is to occur.

A combination of these factors is present in such acute abdominal conditions as appendicitis or cholecystitis. Hence, the gallbladder may more rapidly become necrotic or the appendix gangrenous, without the intensity of focal findings one would expect. A problem the surgeon still meets today, although less frequently, is that of a diabetic patient with acidosis and abdominal symptoms. The abdominal pain of acidosis, which may be severe, is the first symptom to disappear under proper treatment of the acidosis. If there is surgical pathology present, such as acute appendicitis, there will be pain associated with localized tenderness and spasm. These abdominal findings will persist or increase as the acidosis is treated. It is important to emphasize that when acidosis is present, even if there is an associated acute abdominal problem, the acidosis must be rigorously treated before surgery is done, if at all possible.

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The success of surgical treatment in the diabetic patient will rest as much on the management of the diabetes as on the skill and judgment of the surgeon. Therefore, teamwork between internist and surgeon is essential. When diabetes is under control, the anesthetic agent of choice is the one which permits the most expeditious accomplishment of the surgical maneuver. Local or regional anesthesia is ideal for minor, superficial procedures, but should not be chosen for more prolonged or major procedures. Digital nerve block, with or without vasoconstrictors, of toes or fingers should not be used in the diabetic. The hazard of causing digital artery thrombosis with subsequent gangrene is too great. If local infiltration at the site of operation will not suffice, general or spinal anesthesia is preferable. Spinal or saddle block is ideal for perineal operations, and suitable levels for lower extremity or lower abdominal operations are readily obtained. Anesthesia for upper abdominal operations is feasible, but the duration of the operative procedure in this area may make general anesthesia more desirable.

General anesthesia may be safely used in all other surgical procedures if there is adherence to the following principles:

(1). Acidosis must be absent, or under the best control possible. Where acute intra-abdominal disease is present, complete diabetic control may not be possible until the condition is relieved surgically. When operation is undertaken under these circumstances, the calculated risk is increased. Operation should be delayed a few hours for maximum metabolic correction, except in cases of severe bleeding which will respond only to surgical control.

(2). The patient should come to operation in positive nutritional balance. This should always be attainable in elective surgery. The emotional and physical stress, the pain and medication in the major amputation group, frequently results in a less-than-ideal preoperative state.

(3). Premedication should be minimal. Atropine is the only agent used routinely, although a small dose of barbiturate is occasionally helpful in the younger patient.

(4). Hypotension, hypoxia and hypoglycemia must be avoided. Control of ventilation by use of an endotracheal tube, careful adjustment of preoperative insulin and administration of intravenous glucose, plus adherence to the preceding principles, will minimize these anesthetic complications.

The general manifestations of hypoglycemia will not appear under general anesthesia. If any suspicion of hypoglycemia is present, a blood sugar should be drawn and the patient given more intravenous glucose.

A major factor in diabetic surgical problems is diminished pain response, due to impaired sensation. Extensive and serious pathology may be present, with little or no sensory perception by the patient. Most often this is associated with long-standing diabetes and the development of diabetic neuropathy. Position sense is impaired, and in severe cases there may be foot drop, due to motor paralysis. These patients may develop Charcot type changes in the metatarsal joints and, occasionally in the ankle and knee joints. Tarsal joint changes may occur quite quickly and at times the joint may appear acutely inflamed and be mistaken for acute infection, gout, or osteomyelitis. The joint is swollen and may be red, probably a sterile reaction due to bleeding into the joint. The surgeon must not be misled and perform surgical drainage. This is not an operative surgical problem. The characteristic x-ray findings, the absence of an open lesion, and the presence of other criteria of neuropathy support the diagnosis of Charcot joint. The treatment is support with modified or partial immobilization, limited ambulation, and partial weight-bearing over a period of months. The joint will spontaneously fuse in most instances.

Infection and gangrene of the lower extremity, with or without a good blood supply, is a frequent and serious complication of diabetes mellitus. Antibiotics are a most valuable adjunct to surgical management of diabetic infection. They should be used therapeutically and not prophylactically, the proper agent should be chosen by sensitivity tests, and an automatic stop order at 7 to 10 days should be written, to avoid unncessarily prolonged and potentially harmful usage. If a definitive surgical procedure is to be done close to a previously infected wound, such a wound should be recultured preoperatively and the patient covered with antibiotics during the operative period.

A vexing and important surgical problem is the diabetic heel lesion. The usual sequence of events is that a superficial crack in the dry skin becomes secondarily infected, and a painful area of necrosis results. During the initial active phase of the problem the patient should be hospitalized, and the usual conservative measures taken to halt progression of the lesion. If on bed rest and supportive therapy the lesion becomes painless, or pain can be controlled with simple analgesic medication, and the area of necrosis does not exceed 2.5 to 3.5 cm. in greatest diameter, hope can be entertained that such conservative treatment may suffice. If extension of the process develops, a major amputation or successful arterial reconstruction are the only alternatives.

The surgeon should not have sole responsibility for management of the diabetes, but it is helpful to have some program to follow, should he be called upon to act in this capacity.

A patient for elective surgery should be admitted from one to three days prior to the date selected for the operation. In preparing the patient one must try to achieve not only control of hyperglycemia and glycosuria but also hydration of the patient, treatment of correctable conditions such as anemia, and the provision of a diet as nearly adequate in all respects as complicating conditions permit. It is helpful to set the time for the operation early in the forenoon.

In planning treatment for the day of surgery, keep in mind that the patient will usually require as much insulin, or nearly so, on the day of operation as he has been needing during the preceding days. Breakfast is omitted, and one hour before the scheduled time of operation the patient is given one-half of the usual morning dose of insulin. At the same time, 1000 cc. of dextrose in water is started intravenously, and allowed to run slowly. Following the operation and on return to the recovery room or ward, the other other half of the morning insulin dose is given. Food and fluids are then administered, either orally or parenterally, as dicated by the nature of the surgery and the condition of the patient at the time. A patient whose usual before-breakfast insulin dose is 20 units of crystalline and 40 units of NPH or lente insulin would receive 10 units of crystalline and 20 units of NPH or lente insulin at the time of the preoperative intravenous infusion, and then again following the conclusion of the operation.

Usually no further insulin need be given until the next morning. As a safeguard, a blood sugar determination should be done a few hours following surgery, for example at 3:00 or 4:00 p.m., in the case of a patient operated upon during the forenoon.

Certain clinicians follow a program of discontinuing NPH or other depot insulin on the day of surgery and for a few days following this. On this plan, the diabetes is controlled by giving regular crystalline insulin at 4-hour intervals, in a graded dosage depending upon the outcome of the urine test.

However, this type of program often results in inadequate control of diabetes for the following reasons:

(1). It is often difficult and time-consuming to secure urine specimens at stated times post-operatively, unless a catheter is used.

(2). Even with a catheter in place, the tests may not be reliable since the sugar in the urine may represent "overflow glycosuria" from glucose being infused intravenously. This may result in giving an excessively large amount of insulin.

(3). The periodic administration of varying amounts of regular insulin does not provide the smoothness and certainty of coverage, as does the giving of appropriate amount of depot insulation.

(*Continued on Page 65*)

DETECTION, DIAGNOSIS AND TREATMENT OF ORAL CANCER

• About 7500 Americans die each year from cancer of the oral region. If recognized and treated early, cancer of the mouth may be completely eradicated. The author points out that more than 80% of oral tumors, if detected and properly treated at an early stage, can be cured.

Charles C. Sesso, D.D.S.

The dentist and physician who are privileged to examine numerous mouths, note that the oral cavity presents varied lesions which appear to be innocent. For this reason, many are ignored until progression makes it evident that a malignant neoplasm exists.

Cancer of the mouth comprises about 4% of all human cancer and about 10% of all cancer in the upper respiratory and alimentary tracts. Males are affected about five times as frequently as females (cancer of the lips and floor of the mouth 98% in males, cancer of the tongue, gingivae, tonsil, palate and cheek 80 to 90% in males). Intra-oral cancer is mainly a disease of middle and old age, although it may occur in the young, and even in infants.

Causative Factors

The prime cause of cancer in any part of the body has not been established, but several forms of chronic irritations are known to be important contributory factors in the causation of oral cancer. The form of the chronic irritant is of less importance than its chronicity.

About 75% of oral cancer is well differentiated (grade I & II) and the more malignant (less differentiated) varieties of epidermoid carcinoma are more frequently found in the posterior part of the oral cavity (tonsil and base of the tongue) other highly malignant cancers, such as anaplastic and transitional cell carcinoma, also have an affinity for structures in the posterior oral cavity particularly in the tonsillar region.

Early cancer of the mouth is characterized objectively by the appearance of an indurated plaque or ulcer which infitrates the mucous membranes for a varying distance. Upon examination, the primary lesion of oral cancer may appear as a small, smooth granular ulcer, a fissured patch of leukoplakia, a slightly ulcerated papillary tumor, an excavated ulcer with indurated edges or a necrotic ulcer with slough. The most common picture is a coarsely granular ulcer with indurated raised rolled edges.

As oral cancer progresses, ulceration and deep infiltration becomes more apparent, accompanied by extensive secondary infection and only at this time does pain and disability become marked. The later stages are characterized by steadily increasing infiltration of the tongue, cheeks, the floor of the mouth, tonsil and palate. Very often depending upon the site of origin of the primary growth, invasion and erosion of the mandible and maxilla occurs.

The cervical lymph nodes may be involved by metastases early in the course of the disease, while the primary lesion is only a few millimeters in diameter, but such spread more commonly takes place during the advanced stages.

Admittedly, many of the lesions in the oral cavity are benign; however, the hazard of malignancy is so great, no effort should be spared in their detection.

Dr. Sesso is Diplomate, American Board of Oral Surgery; Associate in Oral Surgery, University of Pennsylvania Dental School and Misericordia Hospital, Phila.; Courtesy in Oral Surgery, Fitzgerald Mercy Hospital, Darby, Pa.; Oral Surgery Staff, Riddle Memorial Hospital, Media, Pa.; Consultant in Oral Surgery, V. A. Hospitals in Coatesville, Pa. and Wilmington, Delaware.

Sir William Osler used to tell his students, "Diagnoses are missed not because of lack of knowledge on the part of the examiner, but rather because of lack of examination."

Today, as a result of the work of Dr. Sandler and his group at the Veterans Administration Hospital, Brooklyn, New York, we have a very simple and easily performed screening method for detection. This oral cytologic examination provides a clue as to whether or not a biopsy of the lesion is indicated. The most benign looking lesion should be subjected to cytologic examination because when cancer cells are found in such lesions they are usually amenable to proper treatment with anticipation of a cure.

Oral cytology is the early detection of cancer cells by application of Papanicolaou's technique to oral scrapings. A smear of the lesion should be made as soon as its presence is noted. The area being examined is not to be dried, mucous on the lesion is advantageous as it acts as an adhesive, fixing the specimen to the slide. Using a moist tongue blade the lesion is scraped with a fair amount of pressure so that surface cells and mucous is obtained.

This material is smeared using a circular motion on a standard microscopic slide spreading the smear out thin. The slide is immediately immersed in a wide-mouthed bottle containing equal part of 95% alcohol and ether.

The slide may remain in this solution indefinitely awaiting delivery to the pathologist. Some laboratories prefer a different fixing solution of their own. When a fixative other than the above is to be used, the following procedure is indicated. After the smear has been spread out thin on the slide, cover the specimen with six to eight drops of the recommended fixative. The slide is then permitted to dry in air for from five to fifteen minutes. Once the smear is fixed it may stand indefinitely without deterioration until the laboratory receives it.

It is to be emphasized that the cytologic examination is *not* a substitute for a biopsy, but rather an adjunct to it. Any suspicion of cancer revealed by the smear examination is to be confirmed by a biopsy of the lesion prior to any treatment. The biopsy may take the form of either an incisional or excisional, depending on the size of the lesion.

The incisional biopsy is accomplished by excising a portion of the lateral border of the lesion with extension of the incision into surrounding normal tissue. The excised mass of tumor tissue and normal tissue is submitted to the pathologist. Electro-cautery is not recommended for biopsy as the specimen may be cooked, rendering it useless for histologic examination. The specimen should be obtained by using a sharp scalpel, and the electro-cautery may be used afterwards for controlling bleeding points. This procedure is advised rather than suturing, as it is believed that suturing through the tumor mass will spread cancer cells. After the specimen is obtained it should be placed immediately in 10% formalin solution. The specimen bottle is then sealed and labeled for proper identification before sending it to the laboratory.

An excisional biopsy is indicated when the lesion is small enough to permit complete excision of the lesion with a margin of normal tissue in all planes.

When the pathologist's report states that the lesion is malignant, a decision must be made as to the best treatment for this particular lesion.

The present accepted aim of treatment is either complete removal or complete destruction. Removal is accomplished by surgery and destruction by some form of irradiation.

Another method being used today is the use of anti-metabolites or other chemical agents. These methods should be considered as complimentary rather than competitive. In some anatomical varieties of oral cancer such as cancer of the lips or gingivae, surgery alone is preferable in most instances as the primary form of treatment, although supplementary radiation therapy is often indicated. For cancer of the tonsil and base of the

(*Continued on Page 57*)

TROUBLED TIMES FOR HOSPITALS

MR. PIERRE S. duPONT ADDRESSES
*THE WILMINGTON ROTARY CLUB**

I hope you will all sit back in your chairs and relax, for I am not here to make a speech. I am here to give some facts about a serious problem confronting the citizens of Delaware and their general hospitals.

The first fact will not strike you as particularly new. The cost of medical care has gone up, and it is continuing to go up. The reason is quite simple. When Rotarians and and other citizens become ill, they demand the best care, the newest drugs, the latest techniques, and the best trained people to carry out these techniques.

In the modern hospital, ordinary nursing care is not enough. Skilled people are required to administer the many tests which are a part of modern diagnosis. Laboratory and x-ray expenses alone have risen more than 250 per cent. Those who look after the patients must even include some who are trained in electronics—and in the use of oxygen.

Progress in medical care means that we don't have to stay in the hospital as long as we used to stay. On the other hand, *per diem* costs are proportionately higher. They are expensive even with prepaid insurance, but, for the individual who has neither insurance nor a nest egg, they can be disastrous.

Make no mistake about it—health and medical care are a big and costly business. We Americans spent almost $25 billion for this purpose in 1959, and this represented 5 per cent of the gross national product in that year. Health expenditures have continued to increase with the provision of more hospital facilities, and the prepaid health insurance progrems which make it possible for more of our citizens to have better care.

My second fact may be less evident to some of you. Most of us, I believe, basically favor our voluntary system of hospital operation. We believe those who can pay for medical care should do so, and many Delawareans do. At the same time, none of us would deny this care to those who need it and are unable to pay. Our hospitals provide care for the indigent and for those who live on marginal incomes, and this has become an increasingly serious burden.

Let me be quite blunt about it. Free services are taking an increasingly larger amount of hospital income—income which should be used for improvement, education, research, replacement of equipment, and the expansion of facilities. All of these things are needed to carry out the modern concept of medical care. In brief, if tax sources fail to reimburse our Delaware hospitals for medical care for the indigent, we will ultimately have to sacrifice higher quality service and care.

It has been estimated that there are nearly 18,000 families in Delaware who have annual incomes of $3,000 or less, and nearly 9,000 individuals whose incomes are $1,000 or less. People in these circumstances obviously can't afford the cost of hospitalization, not to mention health insurance, preventive dentistry, and the many other items which we accept as part of good health care.

If you will glance at the pie chart on your information sheet, you will note that the total cost of operating the voluntary hospitals of Delaware last year was $16,500,000.

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*Given on January 30, 1964, Hotel duPont. Mr. duPont is Vice-President, E. I. duPont de Nemours & Co., Wilmington, Delaware.

Blue Cross payments accounted for $7,493,000. Commercial carriers paid $1,650,000. Patients contributed $4,355,000 in direct payments. The State of Delaware provided $877,000 by allocating $550 per bed for hospital assistance. The Levy Courts put up $425,000.

But now for my third fact: Care for the indigent cost our hospitals an additional $1,700,000 for which they were not reimbursed from tax sources.

When these figures are broken down, we find that all Delaware hospitals provided about $3 million in free care in 1963. More than two-thirds of this cost, or $2,617,000, was in New Castle County. The Levy Court of New Castle County provided $300,000, while $125,000 came from the Levy Courts of Kent and Sussex Counties. The State, as I mentioned earlier, provided $877,000.

The overwhelming majority of patients in New Castle County come from the City of Wilmington. Over the years, however, the city has not contributed one cent to the operation of hospitals.

Let it be noted, in passing, that neither the State, the three counties, nor any municipality has seen fit to provide a general public hospital. The burden of indigent care has fallen upon the voluntary hospitals of our state, and their net bill for charity last year, as I have noted, was $1,700,000.

Now for a fourth fact, Hospital finance is changing. Administrators who are now endeavoring to operate hospitals on a businesslike basis recognize that amortization and depreciation are legitimate costs of doing business. The modern tax structure is such that hospitals no longer can rely with confidence upon private benefactors to make up deficits, replace and modernize equipment, and finance new buildings.

The time has come, I believe, when we must frankly accept the fact that the old pattern of hospital financing is inadequate, and that some means must be found to end these huge annual deficits for indigent care. We must continue to look after these people when they need hospitalization, to be sure. Is it wise, however, to sacrifice training programs, education, and research by diverting elsewhere the funds which would be available for this purpose?

This, my friends, is the significance of the $1,700,000 which the voluntary hospitals of Delaware didn't have at the close of 1963. It represents the difference between funding depreciation and not funding it. It makes the difference between making replacements when needed and not making them. It prevents our hospitals from developing forward-looking programs in graduate medical education, from carrying on desirable research, and from providing adequate staff training programs which are essential to attract interns and resident physicians to Delaware.

Our hospital authorities are convinced that, if the present financial system is perpetuated, there is a clear and present danger that not only the quality of hospital care, but the quality of professional medical people who come to Delaware, will deteriorate. The bill for the unreimbursed cost of medical care for the indigent must be paid—if not in one way, then in another.

It is true, of course, that concern over providing proper medical care for all who need it is not confined to Delaware. This is a national problem, and it was recognized in part by enactment of the Kerr-Mills legislation in 1960. This legislation provides for state grants from the federal government on a basis of need. The grants must be basically matched by state funds, with higher percentages to states with low *per capita* incomes. The programs offered are administered by the states.

In 1959, former Governor Boggs requested that the Community Services Council, which was then called the Welfare Council, make a study of the cost of medical services, and the patterns of use, for elderly citizens of Delaware unable to finance their medical care. As a result, our state decided to adopt one part of the Kerr-Mills Act on an experimental basis.

Under the Kerr-Mills program, medical care payments are provided for those who receive Old Age Assistance benefits. About 1,100 are in this category in Delaware, and more than one-half have received some form of medical care, such as hospitalization, doctor's visits, dental care, drugs, chiropractic and podiatrists' services, out-patient clinic visits, or optometric services and eye glasses. Between November 1, 1962, and September 30, 1963, there were some 219 hospitalizations at a total cost of approximately $100,000.

While this program was helpful to the hospitals to that extent, the indigent aged represent only a small proportion of the number in Delaware who are unable to pay for their health needs. It is plain that $100,000 is a far cry from $1,700,000. I am informed that limited study in our state also has shown that people who are over age 65 are just as able to pay for hospital care as those who are under age 65. There are far more in the younger group, so it is obvious that the enactment of legislation strictly for the aged would not solve the major Delaware hospital problem.

Another step which could be helpful was taken last year by the General Assembly. At the request of the Association of Delaware Hospitals and others, the code was revised to permit the Levy Court of New Castle County to contribute as much as $500,000 annually for hospital care of the indigent. So far, the Court has not acted to increase the payment from the current level of $300,000. And again, the additional $200,000 would not substantially curtail our deficit, although it would be welcomed.

The Community Services Council now proposes to collect data which would provide adequate information about all categories of citizens who need medical service, but can't afford to pay for it. The Council also is working with other interested groups to develop a plan for aged persons who may be medically indigent even though they do not receive Old Age Assistance. This could be done through an extension of the existing program or through a prepaid coverage plan under another section of the Kerr-Mills Act.

Until the Council study is completed, we will not have the data required to formulate wise decisions on specific recommendations to solve the over-all problem. You can be sure that no easy answers are foreseen. The delicate relationships betwen industrial New Castle County and agrarian Kent and Sussex Counties pose complex questions, although the changes which are taking place on the Delmarva Peninsula, and which will take place upon completion of the bridge and tunnel to Norfolk, and inauguration of the Cape May-Lewes ferry, may be significant.

I said earlier that I didn't have a speech, and I certainly don't have a solution. The administrators of our hospitals, representatives of the Community Services Council, and your own Community Services Committee, however, thought it desirable to have someone alert you to this problem so that the diversified brains represented in this club could give it consideration.

Let me sum up:

As a community, we cannot afford not to be concerned with our hospitals and with the people who receive care in them.

We need to plan for the case of the indigent.

We must find some way to relieve our hospitals of the annual deficit burden which this has thrust upon them.

We must make it possible for our hospitals to keep pace with medical progress.

We should explore all possible methods of financing from tax sources, whether they be city, county, state, or federal.

I hope all of you will think about it.

THE SURGEON AND THE DIABETIC

(*Continued from Page 60*)

Those patients to whom food and fluid cannot be given orally must be maintained with infusions of glucose in water or salt. These are given just as in a non-diabetic patient, and the insulin dose adjusted accordingly.

With care in treatment, diabetic patients are able to withstand all types of surgery to a degree truly comparable to the person without diabetes.

President's Page

MENTAL HEALTH COMMITTEE

Mental health and mental retardation are currently commanding a great deal of attention throughout the nation. The President of the United States recently said, "*It is my conviction that advances in research, services, and programming in the area of mental retardation make it imperative that a concerted effort be undertaken now to prevent and alleviate this serious condition affecting nearly six (6) million of our citizens.*" My article in the February, 1964, issue of this Journal pointed up the Mental Health Planning Project which is now in progress in Delaware. The questionnaire, which all physicians will receive, is essential to the success of future mental health developments in the State. A mental retardation study is in the making.

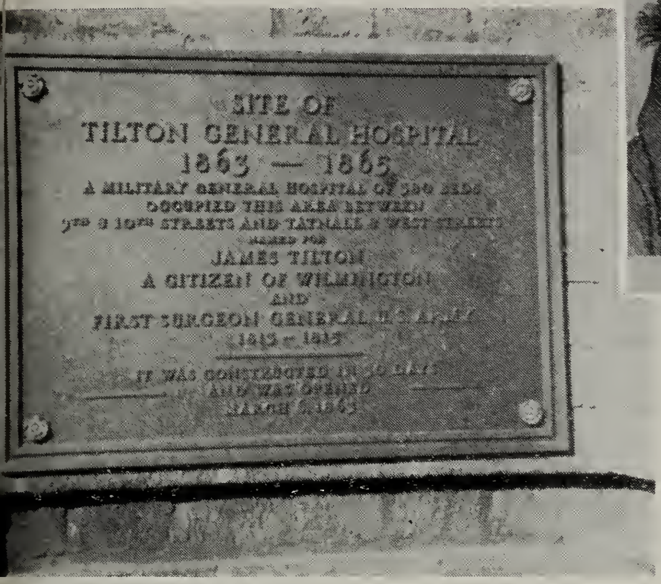
The Medical Society does not have within its organization a special committee on mental health or mental retardation. In the light of the tremendous activity in this field, a Mental Health Committee is being appointed, the duties of which will be to advise the Society on matters of interest in mental health and mental retardation as they occur. Policy which must be developed will require the assistance of such a Committee which can also provide liaison with official and unofficial groups working in the same field.

We have already endorsed the State Mental Health Planning Project. Our efforts must be expanded. This new Committee will assume great importance in expressing the collective attitude of the medical profession toward the resolution of the problem of providing the best possible facilities for the diagnosis and treatment of persons with neuromental conditions.

Floyd I. Hudson

We sincerely regret the error appearing on the President's Page last month. A corrected line of type was erroneously inserted in two places. The first line of paragraph three should have read: "You will soon receive a survey questionnaire designed to give the Planning Project certain basic data from physicians . . . "

COMMEMORATION MARKS DELAWARE'S CIVIL WAR HOSPITAL SITE


SITE OF
TILTON GENERAL HOSPITAL
1863 — 1865
A MILITARY GENERAL HOSPITAL OF 380 BEDS
OCCUPIED THIS AREA BETWEEN
9TH & 10TH STREETS AND TATNALL & WEST STREETS
NAMED FOR
JAMES TILTON
A CITIZEN OF WILMINGTON
AND
FIRST SURGEON GENERAL U.S. ARMY
1813 — 1815
IT WAS CONSTRUCTED IN
AND WAS OPENED

JAMES TILTON
1789 - 1822

The site of Delaware's first hospital, located at 9th and Tatnall Streets in the City of Wilmington, was marked with a bronze plaque and dedication ceremonies on December 14, 1963, through the efforts of the Delaware Civil War Centennial Commission.

Known as the Tilton General Hospital, built by the federal government, it housed hundreds of sick and wounded soldiers in its 380 beds from 1863 until late 1865. By the end of the war it had served the Delaware soldier well.

The hospital was named for James Tilton, M.D., founder and first president of the Medical Society of Delaware. Dr. Tilton served one year in the Continental Congress and several as a member of the State House of Representatives. He never received the recognition that was his due. In 1924, efforts of a committee appointed by the Society for the purpose of renaming Wilmington's Eighth Street Park, *Tilton Park,* were unsuccessful.

During World War II, there was a hospital named after General James Tilton at Fort Dix, New Jersey and is of particular interest to Delaware physicians because most of them who served in the army went through Tilton General Hospital at some time during their army service.

The plaque was unveiled by Harry Repman, M.D., past president of the Wilmington Civil War Round Table. Gerald A. Beatty, M.D., President-elect of the Medical Society of Delaware was the principal speaker and had this to say:

"It is altogether fitting and appropriate at this time that a great man be recognized and a plaque be erected in his memory.

Dr. James Tilton was a great man, probably the greatest man in the history of the society I represent. It was Dr. Tilton who organized the Medical Society of Delaware in 1789 and served as its president until his death in 1882. It was a great tribute to him that the men who knew him best—his fellow members—re-elected him annually for 33 years to serve as its president.

Formerly he had served as a medical officer in the Revolutionary War. His writings on military medicine, such as, "Economical Observations on Military Hospitals" and "The Prevention and Cure of Diseases Incident to an Army," embodied his observations during the war and his earlier recommendations regarding construction and administration of military hospitals. As a result he was offered the post of Surgeon-General of the Army, a post then recently created under an Act of Congress in 1813. He accepted the honor and served as the first surgeon-general.

The members of the Medical Society of Delaware are happy today, to join in this occasion to do honor to a distinguished former member, Dr. James Tilton."

Delaware Academy of General Practice

Dr. Marjorie E. Conrad has been nominated by the Delaware Academy of General Practice for a position on the Board of Directors of the American Academy. We'd like to use this month's page to familiarize the members of the Delaware Chapter with her qualifications.

AMERICAN ACADEMY OF GENERAL PRACTICE

Member—Commission on Environmental Medicine
Chairman—Committee on School Health
Chairman—Committee on Mead Johnson Awards (Member of the Committee for four years)
Member for three years of the Committee on Publications
Chairman of the Credentials Committee for the Congress of Delegates
Member of the Reference Committee on Miscellaneous Business for the Congress of Delegates
Alternate member of the Nominating Committee
Congress of Delegates
  Served eight years as a Delegate, four years as an Alternate Delegate
  Has missed attending only one session of the Congress of Delegates since 1951
State Officers' Conference
  Has attended all State Officers' Conferences; has made four appearances on the Program

DELAWARE ACADEMY OF GENERAL PRACTICE

President, 1961-1962
Secretary, three years
Director, six years
Delegate, eight years
Alternate Delegate, four years
Chairman of Committees on Education
  School Health
  Mead Johnson Awards
  Annual Banquet

MAJORIE E. CONRAD, M.D.
University of Pennsylvania—B.S.—1943
Hahnemann Medical College—M.D.—1946
Internship—Memorial Hopital, Wilmington, Delaware—1947
Private General Practice—Wilmington, Delaware, August, 1947—Present

OTHER MEDICAL ORGANIZATIONS

New Castle County Medical Society
  Delegate to State Medical Society
Medical Society of Delaware
  Member, Committee on Prepayment
American Medical Association
Delaware Academy of Medicine
Delaware Obstetrical Society
Philadelphia Society of Clinical Hypnosis
  Treasurer; now in second term
American Society of Clinical Hypnosis
  Member, Nominating Committee
  Trustee, Education and Research Foundation

ACTIVE IN TEACHING

University of Pennsylvania—Graduate School of Medicine
  Clinical Instructor (in hypnosis) for course "Hypnotherapy and Anesthesia"
University of Delaware
  Guest Lecturer—Anatomy and Physiology in Premarital Courses
Lecturer for Public and Private Schools in Wilmington area on Adolescent Problems

ACTIVE IN COMMUNITY MEDICAL SERVICES

Physician to Florence Crittenton Home, Member of the Board of Directors.
Planned Parenthood League of Delaware—Member of the Board of Directors.

ACTIVE IN NON-MEDICAL COMMUNITY AFFAIRS

Chamber of Commerce
Quota Cub—Past President
Order of the Eastern Star
Daughters of the American Revolution
Community Concert Group

Editorials

HOSPITAL TROUBLES

Elsewhere in this issue of The Journal is a talk "Troubled Times For Hospitals," presented by Mr. Pierre S. duPont to the Wilmington Rotary Club on January 30, 1964. Mr. duPont freely admitted that he did not have the solution to these troubled times. His thought-provoking statements, however, should be considered by all of us and indeed could guide us ultimately to the proper solution.

His five point summary states that as a community, we must be concerned with our hospitals, we must plan for the care of the indigent patient, we must relieve our hospitals of their annual deficit, the hospitals must be allowed to keep pace with medical progress, and all possible methods of financing from tax sources should be explored.

No serious individual can challenge any of the first four points. The last point appears to be the crux of this matter and a springboard toward the proper solution. The objection to point five, of course, is "status quo."

Basically, the problem seems to be, "who is responsible for the care of the indigent patient?" According to our present system the indigent patient is cared for to a large extent by the sick patient who pays his own way. This is brought about by the fact that hospital costs have been increased out of proportion to services rendered simply because the huge charity deficit must be absorbed by someone. The only person to do this at the present time is the paying patient. It seems much more realistic and in keeping with our system of government that the indigent patient should be the responsibility of the entire community rather than charging an unfair assessment to a selected group, that group already having difficulties of their own.

Mr. duPont's talk has apparently stimulated one public official to suggest that the County construct a 500 bed hospital for indigent patients. We do not agree that another hospital is necessary or feasible at this time. More efficient and economic care can be provided in our present institutions. We emphatically agree with his basic premise that the care of the indigent patient is a public responsibility.

The situation at the present time is indeed serious regarding the care of the indigent sick in northern Delaware. If ever a subject is deserving of bipartisian politics, this is one. People who live from day to day expecting the impossible rarely make progress. We might seem to be expecting the impossible to hope that our representatives drop their partisan politics in this instance and take concerted action for the public good. It seems to be, however, our last chance and it would be well for the leaders of both political parties to survey this situation before the inevitable serious results occur.

HOW TO STOP A KILLER

Reasonable men should have no doubts regarding the adverse effects of tobacco on morbidity and mortality. Statistics given to us by the Life Insurance Industry for some time have shown clearly that the heavy smoker (one who smokes a pack a day or more) on the average will not live as long as the non-smoker and his shortened lifetime will be less healthy than that of the non-smoker. Recent reports from other sources have again called this important topic to the attention of the public.

At some of our hospitals in Delaware the suggestion has been made that cigarette machines be outlawed on the premises. To ban the sale of cigarettes in hospitals would merely open the door to bootlegging.

Rather than prohibition, let the medical profession teach the general public by words and action that the cigarette habit is indeed undesirable.

In Brief

Drug Item

Prescription drug prices have declined more than any other major component of the Consumer Price Index, government figures show. The drug price index stands at 93 while the level for all consumer goods is nearly 107.

Mental Health

The number of patients who are residents of state and county mental hospitals in the USA decreased during 1963 for the eighth consecutive year, according to a PHS survey. This shrinkage has been achieved in spite of the increase of persons admitted to mental hospitals. The 1963 total of 504,947 public mental hospital patients represents a decrease of 9.7% of the hospital resident population. It has been shown that when care for these patients is provided in a familiar home-setting, fewer patients require 24-hour hospital treatment, the time of treatment is shorter, and the tragic disruption of human life is lessened.

AMA Annual Meeting Notes

The computer's potential role in forecasting the manifestations of the human organism will be explored during a half-day scientific program at the San Francisco convention June 21-25. Lemuel C. McGee, M.D., Secretary of the AMA—Section on Preventive Medicine, has announced that seven of the country's top computer experts will serve on a panel to discuss the machine's role in the field of medicine. *"The computer was selected as a subject," said Dr. McGee, "because every medical researcher, physician, clinic and hospital has been striving for some time with mountains of data requiring classification, analysis and storage. Experts may pave the way of shifting this burden to modern electronic data processing equipment with tremendous economies in time and gains in precision."*

Scholarships Announced

Scholarships to finance special training for professional workers have been announced by the Easter Seal Society. One group of scholarships is available to physicians, therapists, educators and other specialists with an April 1 deadline; the second group of scholarships is available to students completing courses in physical and occupational therapy—application deadline, May 15.

Personal Glimpses

William O. LaMotte, Jr., M.D., was elected Secretary of the Council of Delegates, National Medical Foundation for Eye Care at the annual meeting held in New York City . . . Edgar R. Miller, M.D., Wilmington, has been honored by King Mahendra, Ruler of Nepal, India and is the first foreigner to ever receive a national citation called, "Gorkha Dakstshiva Bahu;" Dr. Miller and his wife Elizabeth Miller, M.D., a pediatrician, were the founders of the United Christian Mission to Nepal in 1955 and had set up the first Christian medical work in that country . . . Marjorie E. Conrad, M.D., will be on the scientific lecture program of the 16th Annual Scientific Assembly of the American Academy of General Practice, April 15, in Atlantic City; her subject will be "Childhood and Adolescence" . . .

A King Honors One Of Our Members

Dr. Edgar R. Miller, Methodist medical missionary to Nepal, receiving a national award from King Mahendra of Nepal.

A Letter To Society Members

Wayne Calloway, recipient of the 1963 scholarship award given by the Medical Society of Delaware writes: "*Medical school is exciting and challenging. Northwestern is an excellent university. The quality of instruction is high. An initial adjustment to the "scientific" aspects of medicine has been made, and I look forward to the remainder of this, my first year. Thank you for making it possible. Your financial assistance and moral support are a great encouragement. Warmest regards to the members of the Medical Society of Delaware.*"

Clinical Center Studies

STUDY OF OSTEOPETROSIS AND OSTEOGENESIS IMPERFECTA

The cooperations of physicians is requested in the referral of patients with the above conditions for studies of calcium metabolism now underway at the Clinical Center, N.I.H., Bethesda, Md. Patients should be between the ages of 21 and 51, in good general health, without gastrointestinal or renal disease. They should be ambulatory, and able to remain in the hospital for 3 to 4 weeks for blood tests, radioactivity measurement, and a metabolic balance routine. Contact Dr. Leon E. Rosenberg, Metabolism Service, National Cancer Institute.

STUDY OF PINEALOMA

Cooperation of physicians is requested in a study of children patients with pinealoma, now being conducted by National Institute of Mental Health at NIH. The primary purpose of this study is to determine whether pineal tumors synthesize compounds whose identification would provide diagnostic assistance to the practitioner. Of particular interest are children who have precocious puberty or evidence of a delay in the onset of puberty (girls age 15 who not yet had their menarches). Information concerning all pinealoma patients is needed in order to determine if further study would be of value. Hospitalization of the patients in the clinical center is not necessary as they will not have to be examined here. Instead, a brief medical history including pertinent information about the child's gonadal development is requested. If surgery is performed on the patient, a piece of the tumor tissue (which has been frozen soon after removal) would be useful. A urine specimen would be needed from selected patients. Physicians who are interested in contributing information may contact: Richard J. Wurtman, M.D., Laboratory of Clinical Science, NIH, Bethesda.

Auxiliary Affairs

PROFILES OF OUR COUNTY PRESIDENTS

Mrs. James P. Aikens—New Castle County

The President of our New Castle County Medical Society Auxiliary and her husband have both journeyed to us from the far north. Kay and Jim were born and raised in the town of Regina, in the Province of Saskatchewan, Canada.

World War II found Mrs. Aiken serving in the capacity of a Navy Nurse, travelling around to various port bases. Following her tour of duty, Kay returned to Regina, and became the scrub nurse for a very prominent Canadian obstetrician-gynocologist. It was during this time that Dr. and Mrs. Aikens became acquainted while Jim was commencing his residency in anesthesiology. The Aikens were married in Regina then moved to Montreal where Jim completed his residency. Upon completion of this residency the Aikens moved to Wilmington with their new six-week-old baby, Patty. Since their arrival fifteen years ago, Dr. Aikens has been successfully engaged in the practice of anesthesia at the Delaware Hospital.

Through the years in Wilmington, Kay has more than assumed her share of responsibility toward her community, serving in almost every capacity possible in the Medical Auxiliary, along with the chairmanship of the State *Para-Medical Careers* for six years. The Red Cross has also been one of Kay's pet projects, and she has held the position of chairman of their nursing service.

Patty, their 15 year old daughter, now has two sisters and one brother—Joanie, age 13, Kathy, age 12, and Jimmy, age 6. Vitally interested in the welfare of her children, Kay has served on the school board of Ursuline Academy which all of the children attend.

Along with her concern for the children is Kay's enjoyment of the leisure time she and Jim can manage to share. Golf is their common love and whenever and wherever possible they are "on the links."

Mrs. W. P. Portz—Sussex County

Unbelievable as it may seem, the President of our Sussex County Auxiliary, Mrs. Philip Portz is the mother of eight children, two boys and six girls. To undertake a presidency with such a full household to manage is certainly worthy of much admiration, but the story does not end there. Evelyn, as of this writing, is momentarily expecting her ninth child. (*Editor's note: Another girl has been added!*)

Mrs. Portz, the daughter of a regular Navy officer, was born in San Diego, California, and travelled very extensively during most of her youth. Dr. and Mrs. Portz met while the former was attending George Washington University Medical School and Mrs. Portz was serving in the capacity of a secretary at the Pentagon. Dr. Portz was also a "Navy Junior" (child of a regular Navy man), and through a twist of fate they learned that Dr. Portz's father was the skipper of a ship that Mrs. Portz's father had served on.

Their marriage took place in 1949, and nine years ago, Dr. and Mrs. Portz arrived in Milford, where he is presently pursuing the practice of anesthesia.

Aside from caring for such an overwhelming household, and manning the reins of the Sussex County Auxiliary, Mrs. Portz has found time to participate in church work, to serve in the Auixiliary to the Milford Memorial Hospital and as secretary of her local P.T.A. During Mrs. Portz's "spare time," she is studying Spanish.

The profile of Mrs. Maynard H. Mires, third County President will appear next month with photographs of all three presidents.

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NURSING CARE AND THE PATIENT WITH BILIARY TRACT DISEASE

• The hospitalized patient who has biliary tract disease needs much more from the hospital care team than attention to the liver, gallbladder or bile ducts, alone. To accomplish this it is essential to recognize the patient as a human being—not a room location, a gallbladder disease or a stone case.

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Beverly Calderwood, R.N.
Nora Millers, R.N.

Introduction

Patients with biliary tract disease do not usually have disease limited to the gallbladder or the bile ducts. Consequently, in caring for such patients our interest is in everything relating to each patient rather than just to jaundice or pain.

Ordinarily, the risk of surgical procedure—for example—in the management of cholelithiasis, is and should be less than the risk of complications from the disease itself. For this to be maintained as a truth, it is essential that the *hospital-care-team* should provide maximum cooperative effort. At the same time, certain biliary tract diseases, such as severe hepatitis, can require maximum attention to medical care including infectious precautions and other details. All in all, both the patient and the biliary tract disease represent a constant challenge to everyone on the team.

Not only does the nurse need highest professional capabilities, but she also has to be eminent as a scientist, diplomat, executive, secretary, instructor for the patient, student of problems and sounding board for the patient's family.

The hospital-care-team not only includes physicians, surgeons, consultants and nurses, but also paramedical personnel such as x-ray and laboratory (many departments) technicians, as assisted by administrative departments including the clerk in the blood bank, the member of the housekeeping department who empties the trash cans, the typist in the record room and the volunteer who escorts the patients' travels.

Obviously all that is done for the patient with biliary tract disease is also done for other patients, but the patient with biliary tract disease needs the care as is also provided by physicians, some of whom may be specialists. The gallstone can be accompanied by prostatism, hypertension, coronary disease or gout.

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Medical And Surgical Objectives

Medical and surgical objectives are established to assure thorough and detailed care and evaluation of each individual patient with efficient preparations for management including surgical operations and convalescent rehabilitation. Another objective is to assure safe movement of the patient to and from all areas in the hospital.

Medical and surgical problems met in the patient with biliary tract disease include those affecting all age groups and all personalities.[1] Pain, jaundice and faulty digestion are the most frequent symptoms bringing the patient to the hospital. Pain is colicky; jaundice is intermittent and indigestion very annoying, occasionally progressing toward malnourishment. However, these patients may present no more in the way of symptoms than a melancholy, "bilious" and cranky disposition.

Liver and bile duct disease does not respect age, sex or race. Congenital bile duct atresia, choledocholithiasis, Oriental parasitic abscess and pancreatic neoplasm differentiate some common types. In addition, these causes for biliary tract disease may be duplicated by icterus neonatorum, hemolytic disease, Jamaican bush tea intoxication and pancreatic cysts.

The nurse is one of the few on the team who can observe and record physical and emotional problems confronting the patient, his family, his doctors and provide assistance in their solution. The patient should be prepared, conversationally, for procedures which will be taking place, stressing optimism and confidence. Proper professional attitudes will instill a feeling of confidence in both the patient and the family concerning the events and people that without explanation can be unexpectedly traumatic to the patient.

The nurse must provide for liaison and cooperation among the nursing staff, nursing aides, dietitian and dietary help, hospital cleaning personnel, volunteer and the various technicians including the x-ray, hematology, chemistry, intravenous team and adjuvant technical assistants as indicated. It is extremely valuable for the nurse to know those hospital personnel and that mutual respect be earned.

Liaison with departments of pharmacy, housekeeping, central surgical supply is essential for maintainence of necessary equipment and materials. The nurse must know where to get what she needs when the patient requires it and under differing circumstances for each of her patients.

Since every patient with biliary tract disease can have one or more problems the nurse has to understand the nature of the different types of gallbladder disease, their complications and sequellae together with the usual and other forms for medical, surgical and other treatments. In each case, the nurse has to understand and be able to implement and accomplish the specific dietary, medication and other treatments as prescribed and as are needed for each individual.

To assure these, it is essential to recognize the patient as a human being—not a room location or a case history.

To maintain the self-assurance which gives the observant patient confidence in the environment, every member of the team should know anatomic, physiologic and emotional factors in each of the patients due to his disease as well as those changes which can be produced by the hospital.

Furthermore, all on the team must be aware of the medical and surgical objectives and the plans available to and selected for each patient. Every member of the team needs mastery of their technical skills in applying diagnostic, preventive and therapeutic procedures. The nurse is the cornerstone and an integral part of the hospital-care-team. Both nurse and team are mutually interdependent; one cannot function without the other.

The Gallbladder Operation

Proper preoperative skin preparation, correct (for x-ray) and comfortable (with no abnormal pressure) positioning of the patient together with adequate and safe draping techniques are essential.

All instruments should be in working condition and the proper ones selected for the procedure.[2,3] Running inventory of all equipment should be maintained and deficiencies are to be corrected at once.

Drainage catheters and tubes must be in perfect condition and suitable to the duct or organ to be drained. If a damaged tube is used, a fragment may remain in the wound when the tube is being removed. To drain the gallbladder bed, the tube must be of a sufficient length and distal end of the tube or catheter should be beveled and should have several lateral openings near its tip. If these openings are made during operation these pieces should be discarded carefully. To make sure that a tube is open, the scrubbed nurse may flush it with normal saline. Ureteral catheters, if used, should be irrigated also. Various sizes of needles to fit the catheters as well as syringes should be inspected. Different useful sizes of drainage catheters and tubes must be at hand for operative procedures in order to eliminate delay.

Conscientious operating room nurses check suture cards and prepare various types and sizes of suture materials. Operating room nurses are aware of sutures best suited for various tissues, structures and organs. All needles used must be free from defects; selection of desired size is important.

While assisting during the operative procedure the scrubbed nurse is conscious of her aseptic technique, the surgeon's requirements and constantly employs good judgment and technical skill.

The circulating nurse is continuously aware of any needs by the surgeon, scrubbed nurse or anesthesiologist and must be capable of supplying the necessary items. Such needs may include assembling sterile solutions, drugs and the equipment needed for their use. The care of specimen and its labeling are important. She is to know the location and use of emergency material including that used for cardiac resuscitation.

As soon as dressings are applied and with approval of the anesthesiologist, the patient is transferred into bed with proper attention to airway, intravenous fluids, catheters and the physical strength of the people who do the lifting.

Housekeeping of each operating room is not to be overlooked since without the careful cleanliness and maintenance of walls, floors, cabinets, lights, outlets and sinks the surgical procedure cannot safely begin.

In the recovery room the patient's airway is checked as are the vital signs. Drainage tubes are connected to drainage bottles. In order to prevent total loss of bile the drainage tubing or collecting bottle may be elevated on to the stretcher to the level of the abdomen so that bile will drain through the apparatus only if pressure develops in the duct system. Any losses should be noted on the "record" of the patient along with other observations. Any medications given, at this time as at other times—should be noted.

These patients, in the immediate postoperative period, are especially susceptible to pulmonary complications not only because of their incisions but because of their helplessness. As soon as the patient is responding to stimuli, his deep breathing should be encouraged. Aspiration apparatus, if needed, should be ready for use. Dressings should be carefully observed for any ooze from operative site and frequent check of vital signs may indicate presence of shock or myocardial damage.

Once the patient is awake and shows no defects which would require immediate reoperation, he is transported from the recovery area to his room. Nursing care is preeminent in all of these phases.

Postoperative Care

Postoperative care had begun originally with the admission of the patient to the hospital and possibly before, when explanations had been given by the physician to the patient and his family. Among the important factors is the realization by the family that frequent visitors to a postoperative bedside are often impediments to the convalescence and recovery of the patient. Of course, there are times when a well-trained, cooperative and calm member of the family can augment the comfort and well-being of the patient. It is never forgotten that the nurse is primarily responsible for immediate postoperative care when the patient is returned from operating recovery room. She, by her observations of vital signs and the characteristics of the patient's activities and sensorium, can evaluate the advisability for attendance by any non-professional. For example, the recognition of rate of flow from intravenous bottles and need to replace bed linen which has been thrown off the patient do not always require a nurse. But, the care of nasogastric tubes, urinary catheters or T drains, of oxygen tents and suction or aspiration apparatus are basic professional duties provided by the nursing and medical staff at all times.

Nursing functions are never to be transferred to an unindoctrinated individual. Although untrained assistants can measure fluids by the glassful, the recording of accurate data is the primary responsibility of the nurse. The intravenous and oral fluids, the color, quantity and character of urine, bowel motions, stomach drainage and perspiration are all to be noted and recorded by professional aides.

As the patient recovers his normal capabilities, the previously beneficial assistance in breathing, turning and moving become replaced by voluntary efforts and now the important feature in convalescence is the encouragement towards restoring the patient's selfconfidence.

Not every patient can be permitted to be up and out of bed within hours after operation; some who have a poor myocardium or others who have had extreme blood loss or some who have too many tubes attached to them can not always be ambulated. It is, however, customary in practically all individual patients to indicate the extent of activity for each patient. If these are not noted, it is up to the nurse to question the surgeon; failure to question this may be as much a part of a failure in professional competence as overlooking a written order. Obviously, care of appliances, tubes and intravenous fluids are done without specific orders.

The calm assurance of a sweet voice and happy smile can do more than all the narcotics, analgesics and soporifics in the pharmaceutical armamentarium and no written order is going ever to provide for courtesy nor will one ever replace the Golden Rule.

For a few days after operation, the patient who has been treated surgically for biliary tract disease is uncomfortable. To add to the misery, the sight and taste of food are usually objectionable. Therefore, among items of prime importance are the appearance of food "trays," methods used in assisting feeding as well as the specific foods used in the diet. With the wide variety of juices and fluids available in the refrigerator it should not be difficult to provide one patient with apple juice, another with grape juice and a third with grapefruit juice, provided that each of these agree chemically and psychologically with the patient who is taking them. Some patients may enjoy iced ginger ale, others hot broth and in each case the previous interval of preoperative observation had given the nursing staff enough information about the preference of each patient. Dietary intake is as important as medicines; it should not have to be prescribed that way.

When the patient is relieved from severe pain, he is able to move about and breathe with greater ease. It is not beneficial to withhold medications; it is wiser to alleviate the pain in the immediate postoperative period. Anyone who has ever had an operation can testify to this. Of such is the essence of the first step in rehabilitation to normal.

Subsequently, the amount of medication required must be adjusted to the individual patient and this frequently must be done in accordance with the nurses' observations concerning the effects of the drugs. The physician uses the nurses' notes to supplement his estimate of the patient's needs and requirements.

During postoperative care of the patient all the liaison factors, all the scientific principles and all the technical "know-how" which

ALBERT EINSTEIN MEDICAL CENTER
PRE-OPERATIVE CHECK LIST

7-3) Preceding 24 hours.
3-11
.... History
.... Physical Examination
.... Pre-operative orders
.... O. R. Permit signed
.... C.B.C.) Time done previous to
.... Urinalysis) Pre-Op O.K.'d by Dr.
.... Additional Lab. work
.... Skin Preparation
.... Pastor Request (called direct)
11-7
.... Meals withheld on diet list
.... 4 Stamped addressograph tapes affixed to front of chart holder
.... Pathology Card
.... Pathology Sheet
.... Transfusion Sheet
.... Personal hygiene needs
Responsibility of 11-7 Nurse or personnel assigned if Pt. going to O.R. by 10:00 a.m.
7-3 Days of Op.
.... Vital signs—T.P.R.
B.P.
.... Check Prep
.... Remove Bobby Pins, Lip Stick, Nail Polish
.... Valuables
...... Dentures (in container at bedside)
...... Wedding band secured
On call ...... Other valuables (usual procedure)
.... Check Voiding
.... Pre-operative medication
.... Pre-operative charting

The above items have been checked by me and are complete:
SIGNED .... DATE ....
Head Nurse or Charge Nurse
To be completed and attached to front of chart of all patients sent operating room. (Under Transfusion Sheet).

Example of the checklist used at the Albert Einstein Medical Center. Emphasis should be given to elements which are often not written—the psychological preparation of patient and family by the explanations—to be repeated as often as needed.

have been mentioned previously, are maintained. Here, also, the entire *hospital-care-team* is working together for the patient's benefit.

Supplementing the general care, specific attention to the genito-urinary system may be required in one patient because of the prostatism; another patient may have severe arthritis and require bed boards; another patient may need therapy with an intermittent positive pressure mask using an aerosol and antibiotic in order to maintain adequate respiratory efficiency; still another may require the daily application of elastic bandages to the legs. The patient with gallbladder disease may need every one of these and more.

Some patients need only a few hours of good sleep, undisturbed by visitors or by therapies. Sometimes it is not necessary to disturb a sound sleep in order to inject an antibiotic which can be given a half hour later. These deviations fall within the realms of the wisdom and experience of each nurse.

(*Continued on Page 92*)

NUTRITION AND COLLAGEN DISEASE

• Altered or abnormal nutritional intake or utilization has been shown to adversely affect protein metabolism. Its application to collagen disease is hypothesized in this article.

Henri F. Wendel, M.D.

Patients presenting with signs of a collagen disease, such as rheumatoid arthritis, frequently show laboratory signs of undernutrition. In particular, gamma-globulin levels may be elevated, albumin/globulin ratios depressed, and hemoglobin and hematocrit lowered. These findings are typical of protein malnutrition as observed in individuals or populations consuming too little protein or too low a quality of protein.[1] They are also observed in emaciation or generalized undernutrition as reported by Keys.[2] However, if the patient is not emaciated and appears to have been receiving an adequate caloric intake, these signs appear referable to an abnormal protein metabolism giving rise to laboratory findings which are similar to those observed in protein malnutrition of dietary origin. In particular, one is dealing in this case with a state of protein depletion without concurrent caloric insufficiency. This may be caused either by a reduced anabolic rate, accelerated catabolism, or both.

Low intakes of protein or too low a quality of dietary protein connot be of themselves a primary cause of collagen disease; otherwise, whole populations in the technically underdeveloped parts of the world would be afflicted with these disorders. On the other hand, poor protein nutrition could be a contributory factor in certain individuals who for some reason are especially susceptible to collagen disorders. In one study done with a strain of mice subject to a degenerative arthritis, animals receiving a high-protein diet exhibited less joint disease in old age than a control group receiving the normal stock diet.[3] Coburn and Moore reported that children receiving ample quantities of animal protein in their diets appeared more resistant to rheumatic fever than children consuming less-than-adequate quantities of protein.[4]

It should be borne in mind, of course, that the disease process itself may elevate or distort the normal pattern of needs for nutrients important in the body's protein metabolism, including not only amino acids, but possibly vitamins and minerals. Once the disease has begun, therefore, the normal diet may no longer provide the amounts or pattern needed for optimal maintenance of body tissues.

In drug therapy of collagen disease, the corticosteroids are commonly used because of their ability to suppress inflammation and the hyper-immunologic responses which some believe to be involved in the onset of collagen disorders. Unfortunately, the corticosteroids inhibit protein synthesis in the body tissues generally, with the possible exception of the liver.[5,6,7] In the child, this leads to growth depression and in the adult to negative nitrogen balance.[8,9] Nitrogen losses, initially large, may subside and fall to a level hard to detect experimentally, but anabolic processes in the body continue to be inhibited and fail to replace catabolic losses. Thus, muscle wastage, thinning of the skin, osteoporosis, activation of gastric ulcers, and spread of tuberculous foci may be sequelae of this failure of tissue repair. Therapy with appropriate nutrients and hormones might conceivaly ameliaorate many of these side-effects and extend the use-

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fulness of the corticosteroids.

Some related aspects are discussed below.

Protein Depletion And BMR

A number of investigators have observed marked reductions in BMR associated with losses of body nitrogen.[2,10,11] Subnormal gains of nitrogen in growing children are also associated with subnormal BMR.[12] According to Allison, reduction in metabolic rate associated with body protein depletion is primarily due to reduction in the body's labile protein stores, chiefly the enzymes found in the internal organs and endocrine glands.[13] Reduction in these enzymes which are the organic catalysts responsible for such processes as production of hormones, the Krebs and other energy-producing cycles, and tissue anabolism, occurs quickly because of their short half-life as compared with structural proteins. Rapidly lost in protein depletion, they can also be rapidly regenerated if dietary metabolic conditions are favorable. The BMR should then rise even though muscle tissue and other structural tissue may remain reduced in mass for a time.

Use of BMR measurements are therefore an excellent tool for following the effect of drug, hormone and nutrient therapies. A victim of collagen disease, if initially depleted, would have a subnormal BMR and not be likely to show, on institution of corticosteroid therapy, as large a lowering of BMR or loss of nitrogen as a person with normal nitrogen stores. However, improvements in nutritional status should be accompanied by a rise in BMR.

Amino Acids And Steroid Metabolism

Dietary deficiency of methionine in monkeys[14] and of lysine in dogs[15] has been found to cause marked elevations in serum cholesterol.

Collagen And Hydroxy-Lysine

Collagen is unique in its amino acid composition in that it contains hydroxylysine and hydroxyproline. These amino acids are not obtained as such from the diet, but are synthesized in the body from lysine and proline, respectively.[16,17,18] Proline is classed as a dispensable amino acid, synthesizable within the body, so the problem of dietary supply is not believed to be important. Lysine, however, may be short in the diet or in particular meals if inadequate meat, milk, cheese, and fish are not consumed. If the diet is short in lysine, anabolic processes in all the body tissues are retarded by reduced availability of lysine in the body's amino acid pool, but in collagenous tissue, anabolism is retarded not only by reduced availability of lysine, but also by reduced availabality of hydroxylysine.

Calcification, Lysine, And Hydroxylysine

Piez has noted that calcified tissues throughout the animal kingdom characteristically contain hydroxy-lysine and suggests that this amino acid plays some important but as yet undetermined role in calcification.[19] Wasserman and co-workers found that lysine and arginine, administered as free amino acids on an empty stomach in rats, were particularly effective in increasing absorption of calcium and deposition in the femur.[20] In a mixed diet, presumably already adequate in lysine without further additions, this effect was not noted.[21] Likins and co-workers, adding lysine to a diet based on a lysine-deficient protein, obtained maximum growth in young rats with 0.5% supplementary lysine, but 1.0% lysine gave higher calcium content in the growing ends of the tibia.[22] Modest differences in dietary lysine can produce profound differences in the rate of protein matrix anabolism and mineral deposition in young growing animals. For example, Braham and co-workers found, in young chicks receiving diets 83%—adequate and 100%—adequate in lysine, a 20% difference in femur length and a 100% difference in femur weight in favor of the 100%-adequate group at the end of five weeks.[22]

In very recent research it has been determined that the class of nuclear proteins known as the histones is of major importance in regulating the activities of DNA. The histones are largely basic, positively charged proteins found in the nuclei of all cells, closely associated with the acidic, negatively charged DNA;[24,25] the combination are known as nucleohistones. The histones are mainly of two types; those rich in arginine, an amino acid that can be synthesized in the body, and those rich in lysine, which must come from an exogenous source. The lysine-rich histones may contain 25% or more by weight of this essential amino acid. At the present time, it appears likely, from the experimental evidence to date, that most nuclear DNA is bound to histone fractions, such as the arginine-rich histones, which inhibit the synthesis of 'messenger'-RNA's. Active genes or priming sites would contain the lysine-rich histone fractions or a histone complex which favors DNA utilization as a primer for RNA synthesis.[3]

Reduced availability of lysine for synthesis of lysine-rich histones therefore could have distinct repressive results on protein synthesis, mitosis, and growth rate. This hypothesis provides a logical explanation for the known overall higher requirement for dietary lysine by the young animal as compared to the adult.[26] By the same token, in those tissues of the adult in which rapid mitosis and protein synthesis is still required, as in bone marrow, osteoblast cells, gastro-intestinal epithelium, etc., an abundant lysine supply remains an important consideration for optimum health.

Corticosteroid Therapy And Lysine

Albanese and co-workers recently reported some interesting findings in supplementing the diets of eleven adults with lysine during therapy with prednisone and prednisolone.[23] Institution of cortocosteroid therapy was observed to produce not only characteristic losses in total nitrogen, but also an average 25% reduction in plasma level of free lysine. Plasma methionine and threonine were not lowered. The average protein intake of eight of the subjects studied exceeded 88 grams per day, while three subjects consumed an average of less than 73 grams per day. The diets are not described in detail, but presumably were based on the usual assortment of American foods and therefore not likely to be lysine-deficient.

Supplementation of these diets with 600 mg. of lysine daily, administered simultaneously with the corticosteroid, elevated plasma lysine levels to normal in all cases. The nitrogen losses were reduced or abolished by the lysine supplement in those patients receiving more than 88 grams of protein per day, but not in the patients receiving less than 73 grams per day.

Lysine supplementation, together with a high-protein diet, would appear from this limited study to offer the possibility of ameliorating side-effects of corticosteroid therapy. If so, a notable advance in the therapy of collagen diseases will have been achieved. This study by Albanese and co-workers, however, was done with too small a number of subjects and for too short a time to warrant any sweeping conclusions at this time. Any adjunct to corticosteroid therapy which could accomplish a substantial reduction in such serious side-effects as osteoporosis and ulcer activation deserves extensive, carefully controlled studies in a large number of patients, carried out over a long enough time to determine its value for the patient who must receive corticosteroids indefinitely or over prolonged periods. This appears to offer a prime immediate opportunity for fruitful research in the area of protein and amino acid metabolism as related to collagen disease.

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THROMBOEMBOLIC PHENOMENON ASSOCIATED WITH THE USE OF PROGESTATIONAL DRUGS

• A case of fatal thromboembolism occurring in association with the use of an oral contraceptive is discussed along with pertinent literature on the subject.

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Since the introduction of Enovid (Norethynodrel with ethymylestradral) for clinical use in 1957, more than 4 million prescriptions have been filled in the United States alone.[1] Although its general use has been well accepted, recent reports have implicated it in association with thromboembolic disease. The purpose of this paper is to present a case of fatal pulmonary thromboembolism in an otherwise healthy female on Enovid therapy. A review of the available literature concerning this subject will follow.

Case Reports

A 28 year old Negro female was brought to the hospital in acute shock with complaints of pain in the left lower chest of 16 hours duration. The pain started abruptly in the right chest, shifted to the precordial area and later to the left lower chest. There was no associated nausea, vomiting, cough or hemoptysis. There was some degree of dyspnea even at rest. The patient had been in apparent good health prior to this illness. Additional testimony revealed later the patient had had 5 normal pregnancies without any incidence of varicose veins, thrombophlebitis or thromboembolic phenomenon. She had been taking Enovid (5 mg daily) for the prior 6 months without complications. There was no history of cardiopulmonary disease.

On examination the patient was in profound shock, blood pressure and pulse were imperceptible. The respirations were deep and slow. Slight degree of cyanosis was present around the lips and finger nails. The lung bases were dull on percussion and the auscultation revealed moist rales, crepitations and diminished breath sounds. The abdomen was soft without any evidence of rigidity or any mass palpable. The laboratory data revealed WBC 15,550, (Seg 50% lymphs 46%) Hb 12.4 gm or 83%; Hct 43%; BUN 11 mg%; CO_2 31 vol%; Chlorides 108.7 mg%, Sodium 133 mg, Potassium 3.4 mg, blood sugar 520 mg% (i.v. glucose drip.).

EKG recorded at this time showed sinus tachycardia, right bundle branch block, occasional ventricular premature contractions, prominent R in V1 and Rr prime in V2 with junctional depression of ST segment in V3 to V6. Despite therapy including closed cardiac massage, artificial respiration and Levophed administration, the patient expired 2½ hours after admission.

Autopsy revealed a triangular zone of recent infarction measuring 4 x 3 cm at the periphery of right lower lobe. Examination of the pulmonary arteries and its branches showed bilateral massive thromboembolism. The cardiac chambers did not show any evidence of mural thrombosis or valvular disease. The emboli in all probability arose from the lower extremities.

Review Of Literature

The first reported case of thromboembolic disease associated with norethynodrel was re-

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ported by Jordan[2] in a 40 year old nurse who developed right-sided pleuresy while using norethynodrel for recurrent endomotriosis. The Medical Letter of July 6, 1962 mentioned 13 cases of thromboembolic phenomenon in patients receiving this drug.[3] DeCosta reported his cases under the heading of "Those Deceptive Contraceptives."[4]

A word of caution was sounded in the editorial of British Medical Journal and a plea was made to publish the clinical details of such cases.[5] Subsequently, short communications have appeared in medical journals.

Two cases were recently reported by McIntyre, Phillips & Voigt.[6] These patients were 27 and 28 years of age. One of them had had prior thrombotic disease after pregnancy.

On September 10, 1962 a meeting to study thromboembolic phenomenon in women using Enovid was called by the manufacturers of the drug. Proceedings have been published.[7] A total of 118 cases of women of child bearing age in whom thromboembolic episodes develop while they were taking the drug were mentioned. Thirty (30) of these were associated with pulmonary embolism. There were 9 deaths. The clinical details of these cases are incomplete. Most of the reported cases occurred in women who had been taking the drug for only a few months and in the average dosage of 5 mg daily. A previous history of varicosities, thrombophlebitis, congestive heart failure, pregnancy or obesity which can be listed as predisposing causes were found in 65 of the 118 patients (54%). In May 9, 1963 issue of New England Journal of Medicine, Minogue et al reported a case of previously healthy young woman in whom massive pulmonary embolism developed while she was taking the drug.[9] Two hundred and seventy two cases of thromboembolic disease in women using norethynodrel in the United States have been reported to the drug manufacturer as of December 26, 1962. Of this group, 31 cases have expired. [12]

The British Family Planning Association has recently described 5 women in whom thromboembolic phenomenon developed while they were receiving norethynodrel. Four of these women had had prior phlebothrombosis during pregnancy. The remaining patient gave no past history of thrombophlebitis, but had had asymptomatic vericose veins for 10 years. Her illness began with superficial thrombosis which extended to the deep venous system and resulted in pulmonary embolism.[13]

Reed and Coon reported 4 cases of severe thromboembolic disease occurring in association with progestational drug therapy.[11]

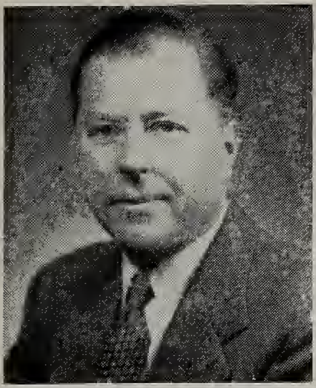
Discussion

The pathogenetic relation between progesterone-like hormones and thrombosis has not yet been clearly defined. Bearnley has speculated that the association of thromboembolism with oral contraceptives may be related to a decrease in spontaneous fibrinolysis induced by these agents.[14] Fearnley and Chakrabarti have recently reported that androgens increase spontaneous fibrinolytic activity.[15] The hypothesis that female sex hormones in increased amounts may have an opposite effect is speculative.

Phillips et al[16] studied the effects of exogenous steroids on the clotting mechanism of human subjects by measuring fibrinogen, profibrinolysin and antifibrinolysin levels. Their data indicate that estrogens and the 19-norsteroid compounds do have an influence on the fibrinolytic enzyme system. Administration of ethynodrel results in a significant rise in profibrinolysin and fibrinogen levels and a less marked increase in antifibrinolysin. They propose that the primary effect of these drugs is an increase in inhibitor level, resulting in decreased activation of profibrinolysin and a subsequent accumulation of this proenzyme. This would produce a decrease in the hydrolysis of fibrinogen.

Ogerberg & Owen[8] reported that norethynodrel in recommended contraceptive dosage produced an increased coagulability of the blood by shortening the cephalin time, increasing the anti HA activity, slightly but significantly increasing the proconvertin activity. Elert[17] has demonstrated a rise in platelet count after intravenous administration of progesterone to human subjects.

(*Continued on Page 92*)



President's Page

IONIZING RADIATION SAFETY

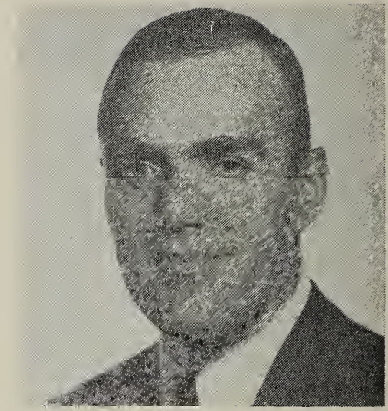
Ionizing radiation safety has received nation-wide attention over the past several years. It has been brought out that the general population receives about one-half of its radiation dosage from medical and dental x-ray. All of us are aware of the need to keep this lifetime dosage of radiation at a low level.

Physicians and dentists who operate x-ray equipment in their offices should be especially careful to minimize the radiation they give to patients and especially to themselves and their assistants. It would appear wise to have office x-ray machines checked for leakage or stray radiation.

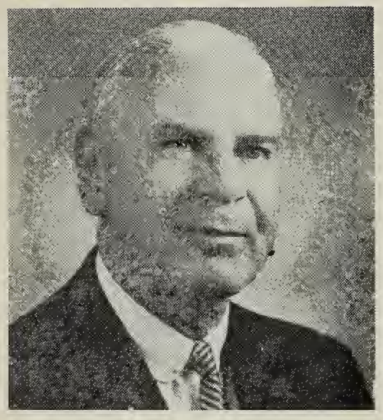
The State Board of Health for the past two years has been working with hospitals, private physicians and dentists on a voluntary basis to check x-ray equipment. The Board maintains a staff trained to do this and has the proper equipment for testing. The machines are examined carefully and a report is given to each owner or operator. The report contains recommendations for improved use of the x-ray equipment. The Radiological Services of the State Board of Health have received 100 percent cooperation from all physicians and dentists on a voluntary basis. We urge you to seek this service if it has not already been offered. You may write and request such service to Radiological Services, State Board of Health, Dover, or telephone 734-5711, extension 227. Your own protection as well as that of your patients can best be assured in this way.

Floyd I. Hudson

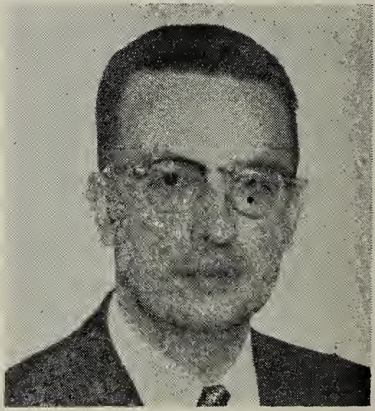
New Members



Robert A. McGregor, M.D., University of Oklahoma Medical School, '52, is a native of that State and transfer member from the Philadelphia County Medical Society. Delaware license: 1963; Specialty: Proctology; Office: Professional Building, Wilmington. Dr. McGregor is unmarried, enjoys gourmet cooking (for guests, of course) and balances this domestic hobby with mountaineering which he learned to enjoy summers when he was park ranger on Mt. Rainier.



Paul Henry Ulrich, M.D., Hahnemann Medical College, '29, was born in Elizabethtown, Pa., and is a transfer from the Blair County Medical Society, Altoona, Pa.; Delaware license, 1963. Specialty: Industrial Medicine; Office: Wilmington Passenger Sation. Dr. Ulrich likes to play golf and is newly interested in pursuing art through classes at the Delaware Art Center.



Rafael E. Alzamora, M.D., University Central of Ecuador, '55, is a native of Quito, Ecuador. He obtained his Delaware license in 1963. Specialty: Surgery; Office: 201 West 12th Street, Wilmington. Dr. Alzamora has four children in steps of 8, 9, 10 and 11—evenly divided in girls and boys—and likes to play tennis.

Louis W. Ferris, M.D., Tufts University School of Medicine, '57, was born in Holyoke, Mass. Delaware license: 1963; Specialty: Urology; Office: Professional Building, Wilmington. Dr. Ferris likes sailing and just messing around with boats in general. There are two little girls in the family—Linda and Joyce.

William D. Bonatti, M.D., Jefferson Medical College, '59, is a native of Pittsburgh, Pa. Delaware license: 1963; Specialty: Ophthalmology. Golf and Squash are his favorite sports and he is a music enthusiast. Dr. Bonatti and his wife are expecting their first child. Office: Professional Building, Wilmington.

George R. Hilty, M.D., Tufts University School of Medicine, '55, was born in Vineland, N.J. Delaware license: 1963; Specialty: Neurology. Dr. Hilty is attending physician for the Catholic Welfare—Foster Children's Program and the Tatnall School, Wilmington. He likes camping and sailing; there are three children, 5, 8, 12 in the family. Office: Professional Building.

John F. Gehret, M.D., University of Pennsylvania Medical School, '59, is a native Wilmingtonian and the son of member Andrew Gehret, M.D. He has offices with his father, 1007 Park Place, Wilmington; Specialty: Obstetrics-Gynecology; Delaware license: 1963. The Gehrets have two children and John Gehret likes to play golf. In 1956 he held Delaware's Amateur Golf Championship!

Charles D. Thomas, M.D., Jefferson Medical College, '57, was born in Mt. Carmel, Pa., and obtained his Delaware license in 1963. Specialty: Pediatrics; Office: Meadowood Professional Center. Dr. Thomas has three children, two girls and a boy. Woodworking is his hobby and when the seasons roll he takes up his gun to go hunting.

Editorials

The article by Mr. P. S. duPont concerning the plight of the Wilmington hospitals and the editorial concerning this subject that appeared in the March issue of THE JOURNAL were referred to a past-president of our Society, Dr. Victor D. Washburn, for his comments. Dr. Washburn's remarks follow.

It is my considered opinion that the public, thru tax funds, should pay for the cost of providing hospital and other health services to those who are unable to provide these services for themselves. I would include those who are disabled but who do not require hospital or institutional care as well as those who need home nursing care, dental service, drugs, eyeglasses, etc.

Hospitalization as a prerequisite to admission to other institutions is wasteful and unsound administratively. An additional hospital in Wilmington, municipal or otherwise, cannot be justified upon any basis at this time.

I would define efficient and economical hospital care as that rendered in a general hospital where the admission of patients is limited to those who should be admitted and at the time that service is available; the medical service is such that every patient is cleared for discharge the instant he should be discharged; and that the patient actually leaves the hospital, without delay, after such clearance.

Under existing conditions no non-sectarian general hospital in Wilmington can meet these conditions with indigent or medically indigent patients. Many of the patients who are ready to leave the hosptal either have no home or require the kind of care that is available at the Welfare Home at Smyrna which includes medical and nursing care, drugs and rehabilitative services.

What is needed, and at the earliest possible moment, is a facility similiar to the one at Smyrna, in or near Wilmington and another accessible to the residents of lower Kent and Sussex Counties.

There is another requirement which must be met if we are to meet my criteria of efficiency and economy. It is one that involves everyone, the public, patients, individual physicians and the medical profession at large. It has to do with personal integrity, ethics and leadership. I am referring to the patients who insist upon being admitted to the hospital even if they have been informed that such admission is unnecessary; or having been told that they are to be discharged say, "Oh, I can't go home tomorrow, it isn't convenient for me." We include the physicians who are dilatory in that they do not discharge the patient at the time that he should be sent home or elsewhere.

There is another custom which I regard as reprehensible and costly to the patient. I refer to the admission of a patient to the hospital on Friday for an elective operation or procedure to be performed on the following Monday. Friday admissions are made because Monday admissions are not available. Laboratory and other preliminary procedures can be performed prior to admission to the hospital.

Finally, those of us in the practice of medicine, and I must stand and be counted here, have failed in our obligations to provide the community with the type of leadership which would have resulted in the construction, long since, of facilities for the kind of care that should be available for the indigent and medically indigent.

AN OPEN LETTER TO DOCTOR X:

Dear Doctor X:

I have just completed examining an old patient of yours. He came to see me for an interim exam before seeking the services of another family physician—he told me that he could no longer consider you as his friend or medical advisor because of what transpired at the time of his last visit to see you. He considers you as "borderline dishonest." I'm sorry that his story is a confidential communication and that I am unable to confront you with it because you are not, in my opinion "borderline dishonest," you are a common thief.

Your ex-patient had been seeing you regularly for a number of years for a medical condition. He did think it odd that you had never examined him. He states that in three years of bi-weekly visits you never thought it necessary that he remove his shirt!

On the day of his last visit, however, you at least rolled up his sleeve. He told you that he had noticed a small pimple on his forearm and asked you to look at it. You did and you applied some type of medication and a band aid. Three weeks later he received a notice from the Blue Shield stating that they had paid your bill of $20.00 for "minor surgery." He declares that there was no surgery of any sort and that he had already paid you an extra fee for the dressing.

Why do you do this, Doctor, to your patient, to your fellow physicians, and to society? You are supposed to be an educated man, having attended college and medical school. You are supposed to be ethical; I challenge you to name one school of medicine that condones such conduct.

I pleaded with your ex-patient to give me his permission to confront you with this matter before our County Medical Society. He refused me this request stating taat he "doesn't want to make trouble." I next urged him to return to see you for one last visit to tell you to your face how he feels. This, again, he refused to do. He does not want to "make trouble."

Your ex-patient is wrong, Doctor. It is you, not he, who is making trouble.

I am proud to be a member of our Medical Society and to be one of a large group of ethical and dedicated physicians. You, too, Doctor X, are a member of our Society and unfortunately, there are one or two more like you. You are the rotten apples that are endangering the barrel. You are a thief associating with honest men and a discredit to our profession.

My hands are tied at present but I give you my word that from now on I'm watching you. If I can obtain information such as I obtained from your ex-patient and if I am free to use it, I promise that I will personally prosecute you to the fullest extent of the law and will see you ousted from the Medical Society of Delaware.

Sincerely

A. Henry Clagett, Jr., M.D.
Editor

CLINICAL NOTICES AND MEETINGS

The 7th Neuropsychiatric Institute of the Coatesville Veterans Administration Hospital will be held on April 22, 1964. Interested guests are welcome; for further information contact: J. A. Doering, M.D., Hospital Director, VA Hospital, Coatesville, Pa.

A meeting of the American Proctologic Society and the section of proctology of the Royal Society of Medicine will be held May 9-14, 1964, at the Bellevue Stratford Hotel, Philadelphia, Pa.

In Brief

Health Insurance Facts

According to the latest date issued by the Health Insurance Institute, people of Delaware have reached a high level in health insurance protection. The following figures show the extent of health insurance coverage in this state.

Number of persons with hospital expense insurance	373,000*
Number of persons with surgical expense insurance	356,000*
Number of persons with regular medical expense insurance	327,000*
Number of persons with major medical insurance	47,000*
Total health insurance benefits paid (1961)	$15,675,000

On the national level health insurance benefit payments by insurance companies during 1963 amounted to nearly $4.2 billion, averaging $11.4 million a day. Major medical expense showed the largest percentage of increase in benefit payments by insurance companies in 1963.

* Nonfederal, short term general and other hospitals.

New Diagnostic Technique

Thermography, one of the newest and most promising diagnostic techniques, uses infra-red photographs of the body surface to spot localized thermal differences between normal and pathologic tissue. It is credited with diagnostic potentials in conditions ranging from rheumatoid arthritis to cancer; it could become routine in diabetic management (long before you pick up clinical evidence of vascular occlusion in diabetics, areas headed for gangrene will show up as cold dark spots on a thermogram); in thrombophlebitis and in the detection of emboli in the legs that may follow spinal and pelvic surgery. Infra-red scanning of the female pelvis can visualize the placenta in cases of third trimester bleeding, while avoiding the hazards of x-ray. It may also be useful in distinguishing normal from abnormal pregnancy. Thermography has proved useful in burns to distinguish areas and degrees of involvement and in the management of trauma. *Medical World News* 5:37 (Jan. 17) 1964, condensed by *Schering Science Bulletin.*

Personal Glimpses

William O. LaMotte, Jr., M.D., of Wilmington, has been reappointed a member of the Council on Legislative Activities of the A.M.A. . . . H. Thomas McGuire, M.D., New Castle, has been reappointed a member of the Council on Mental Health and the Committee on Mental Health in Industry of the A.M.A. . . . Harold A. Tarrant, M.D., was elected president of the State Board of Health, succeeding J. Leland Fox, M.D.,; Raymond A. Lynch, M.D., was re-elected vice-president . . . Marjorie E. Conrad, M.D., participated in a panel discussion on "The Family and the Family Doctor" at the annual scientific assembly of the A.A.G.P. held in Atlantic City . . .

Diabetes Association News

The Lay Society of the Delaware Diabetes Association will conduct its Spring Public Meeting in the form of a workshop, with group discussions touching all the facets of the diabetic patient. It will be held on Wednesday, May 13 at 8:00 p.m. at the Academy of Medicine. Physicians desiring more cards for patient participation may call the Diabetes Association's office at OL 6-0030.

MEDICAL SOCIETY OF DELAWARE RETIREMENT PLAN

Split Funding

This program was initiated December 18, 1963. Many participants are expected to take advantage of it during the year 1964.

The plan offers a wide choice of funding media including a combination of life insurance and equities. As far as we know no other trusteed plan offers this unique life insurance/equity combination. This method of funding of course, offers life insurance protection as an option but also it Guaranteees 1964 Annuity Rates for tomorrow's retirement, whenever that might occur.

Tax Considerations

Under the Medical Society Plan which is expected to qualify under the Keogh Act the deduction allowed on the Federal Income Tax Return is widely known. (50% of the amount we set aside for ourselves subject to a maximm of 10% of our net earnings or $2500 whichever is less is deductible and 100% of the amount we set aside for our eligible employees.) Do not forget however that we also have the advantage of TAX DEFERRED ACCUMULATION. All contributions receive a tax shelter. The dividends as well as capital gains can be received and reinvested completely free of Federal income taxes during the years of accumulation.

Voluntary Contributions

Each participant is allowed to make a voluntary contribution over and above his original 10% of earnings or $2500 whichever is less as long as he allows his employees to participate also. He need not make a voluntary contribution for them and they do not have to take advantage of it for the employer to qualify. There is no tax deduction but there is tax deferred accumulation.

Heart Association Lecturer

The 1964 David Flett duPont Memorial Lecturer will be the eminent vascular surgeon, Ormand C. Julian, M.D., of Chicago. His topic for the scientific presentation will be "Surgery in Arteriosclerosis—Local Treatment for a Generalized Disease." The Delaware Heart Association will present Dr. Julian at the May 19 meeting of the New Castle County Medical Society.

Plans Expand Nursing Profession

The Administration asked Congress to authorize a five-year $260 million plan of federal aid to increase the number of nurses and for federal grants and loans for construction of nursing schools and training programs. The A.M.A. approved in principle the construction provision but opposed the spending of $85 million on loans and scholarships for nursing students. A total of $110 million would be spent over a four-year period on grants to construct new schools of nursing and replace and expand existing ones. Project grants totaling $58.8 million to improve nurse training and service would be allocated to public and private agencies over a period of five years. It is hoped that through the passage of this bill, the total number of nurses in the country (presently estimated at 550,000) would increase to 680,000 by 1970.

Delaware Academy of General Practice

FINANCIAL HELP FOR MEDICAL STUDENTS

Sooner or later the youngster who is thinking of becoming a physician usually goes to his family doctor for advice. Because of his deep involvement with the family, the general practitioner is well equipped to judge the capabilities of the potential physician, and the sincerity of his interest. He can also discuss with deep and personal meaning the opportunities, rewards and drawbacks of a medical career.

Frequently, though, a major factor in the decision will be the high expense of medical education, particularly as compared to the lower initial cost and higher immediate return on a technical education in one of the basic science fields.

Only recently has much been done to alleviate the growing difference in cost between these two types of education. For many years, corporations have provided handsome support to students in technical fields. Now, however, it is becoming easier for the medical student to get help, and it seems worthwhile for the family doctor to know this and be in a position to pass the information along.

There are four known programs within the State of Delaware that can be of varying degrees of assistance in putting a student through medical school. Three are direct assistance grants, while the fourth is a deferred-payment, low-interest loan program. All are restricted to residents of Delaware, although in at least one case "Legal resident" can be subject to interpretation.

Medical Society of Delaware. The state Society's program offers a $2,000 scholarship to a medical student from Delaware, payable in $500 installments over four years. The recipient is chosen competitively on the basis of need and scholastic ability. There is no provision for repayment.

Delaware Academy of Medicine. The Academy's program provides loan funds for medical students who live in Delaware or who are part of a Delaware community, although perhaps not geographically within the state. While the loans are repayable, no payment is expected until the student completes his training. Interest is computed on a simple-interest basis, and at a very low three percent.

National Foundation. The National Foundation offers a $500 per year scholarship to a medical student from Delaware. This, too, is a non-repayable grant and can be renewed each year during the student's medical training.

State Funds. The State of Delaware undertook a program in 1964, with support from the Medical Society and other professional groups, to overcome some of the liabilities a Delaware student has in pursuing professional education which he cannot obtain in Delaware. Administered by the State Board of Education, this program provides grants not in excess of $800 per year for professional training on the post-baccalaureate level which is not available in Delaware. Applications and information can be had from the State Board of Education.

On a national level the American Medical Association, through the AMA-Education and Research Foundation, has established a co-signator program, in which the association signs with the medical student for loans through the regular commercial channels. Since the loans are commercial, normal interest is charged; but since the risk is greatly diminished by the stability of the co-signer, this is usually lower than the student could obtain on his own. At least as important, the co-signer feature makes it possible for the student to borrow when otherwise he would all too frequently have had no opportunity to establish credit and no immediate prospect for satisfying the bank of his ability to repay the loan.

Auxiliary Affairs

PROFILES OF OUR COUNTY PRESIDENTS

• The March issue featured interviews with New Castle County and Sussex County presidents. We continue with Kent County.

To the right is Mrs. James P. Aikens, (New Castle) as she appeared on the Red Cross flyer in her role of volunteer nurse.

Mrs. Maynard H. Mires—Kent County

Presiding over our Kent County Auxiliary is the very charming Mrs. M. H. Mires. A native of Buffalo, New York, Mrs. Mires met her husband while he was attending the University of Buffalo Medical School. Their marriage took place the day of Dr. Mires' graduation from medical school. Dr. Mires chose to take his internship under the Public Health Service at the United States Marine Hospital in Brighton, Massachusetts. Upon completion of the internship, the Mires remained another year at the Marine Hospital, where he completed a one year residency in internal medicine.

His first assignment sent him to Jackson, Mississippi to take part in the malaria control program. During their sojourn in Miss., Stephen, now 15, the first of their four children was born. Upon completion of this job, Dr. Mires was sent to East Texas, and then to a very exciting assignment in Thailand, in 1950, to continue his malaria control work. He was accompanied by his wife and son.

The year 1952 found the Mires family residing in Vermont where Dr. Mires assumed the job of Director of Communicable Diseases for the Vermont State Health Department. Peter, now 10, and Martha, now 7, were born during their stay in Vermont. Amy, their fourth child was born in Dover, four years ago. While in Vermont, Dr. Mires matriculated at Harvard where he received his Master's Degree in Public Health.

Mrs. W. Philip Portz, Sussex County, who recently added a ninth child to her family.

From Vermont the Mires family moved to Dover, Delaware (1957) where they have resided since. Dr. Mires is presently our Director of local health services for the State of Delaware, Kent County Health Officer, and a Deputy State Health Officer.

During the spring of 1963, the Mires experienced the marvelous opportunity of visiting Europe. They travelled to Dover's sister city, Lamia, Greece, with 29 other Doverites, on a "People to People" tour. While in Greece, Ruth and Maynard resided at the home of another doctor and his wife, who operated a small obstetrical hospital. Can you imagine an unusual situation where the guests could not speak Greek, the native tongue and the hosts could not speak English?

This exciting tour was highlighted by a speaking tour, with Dr. Mires addressing graduate public health students from the University of Athens. As well travelled as they are, this was undoubtedly one of the most exciting experiences of their lives.

THROMBOEMBOLIC PHENOMENON ASSOCIATED WITH THE USE OF PROGESTATIONAL DRUGS

(*Continued from Page 81*)

Salvadori et al[10] treated 10 patients with dysfunctional metrorrhagia for five days with a synthetic progesterone, medroxyprogesterone acetate, 10 mg. per day; a definite shortening of plasma recalcification time and Quick prothrombin time was observed.

Although these cases and those reported by the Family Planning Association do not establish a definite causal relation, they cannot be ignored. Only a detailed hematologic survey of those patients developing thromboembolism while on progestational agents will clarify the problem. However, until that time, the use of progesterone derivatives in patients with a prior history of thromboembolic disease or other epidemiologic factors that predispose to the development of thrombosis should be considered with serious reservations.

Summary

A case of fatal thromboembolism and thromboembolic phenomenon occurring in association with oral contraceptive therapy in an otherwise healthy young female is reported. The available literature is reviewed and the possible relation between the administration agents and alterations in the clotting mechanism is discussed.

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NURSING CARE AND THE PATIENT

(*Continued from Page 77*)

Such modifications can be used only if the usual reasons for a procedure are understood fully.

Summary

The patient who has biliary tract disease as the reason for hospital admission needs much more from the nurse than study, care and attention to the liver, gallbladder and bile ducts. To care for all aspects of the patient with biliary tract disease, the nurse is an integral part of the hospital-care-team. Neither can function without the other. The nurses' observations, perceptions, notes, attitudes and procedures are required at the highest professional level of achievement, particularly as these are carefully and wisely individualized to all facets of the patient.

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MAY, 1964
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NUMBER 5

TOTAL TREATMENT OF ALLERGIC DISEASE IN CHILDREN

• The author clarifies significant aspects concerning allergy in childhood; discusses controversial issues such as the role emotions play; and presents documentation of the evidence that asthmatic bronchitis and bronchial asthma are one and the same.

Howard G. Rapaport, M.D.

Allergy is now recognized as one of the major chronic illnesses in the United States. Perhaps as much as 50 per cent of the population shows clinical evidence of allergic illness at one time or another. It is also recognized that most allergic symptoms first appear during the years of childhood. These early symptoms may include colic, croup, recurrent colds or coughs and infantile eczema—but the most obvious manifestation of allergy in childhood is hay fever, and its most frequent complication, bronchial asthma.

The treatment and resolution of pediatric hay fever and asthma occupies a significant portion of the working hours of many physicians. When treatment is specific, the probability of success is high.

Among the principle causes of inhalant allergy, the most well known is ragweed pollen. Other pollens with a high index of sensitization are those of the grass family and those of trees. Inhalant substances other than pollens which may also trigger or contribute to inhalant allergy are dusts, molds, and animal danders.

Another important precipitating factor in inhalant allergy and one which is frequently overlooked—is respiratory tract infection. Such infection may actually be a manifestation of bacterial allergy, but even a simple microbial head-cold may lower the allergic threshold sufficiently to permit the development of allergic symptoms following minimal exposure to other, more common antigens.

The essential first step in the diagnosis of allergy of the respiratory tract or of any allergy, is a thorough, allergically directed history. In many cases, such a history can provide most of the information necessary for an accurate presumptive diagnosis. Since the potential for allergic disease is often inherited, questioning should cover the possibility of other allergy in the parents or other siblings of the patient. Other information which should be elicited includes details of the on-

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Dr. Rapaport is Associate Professor of Clinical Pediatrics for Allergy, Albert Einstein College of Medicine, N. Y.; Physician in Charge of Children's Allergy at Mt. Sinai Hospital and of Children's Allergy Clinic, Bronx Municipal Hospital Center, New York.

set, course, and frequency of the symptoms, seasonality and duration of symptoms, and what factors seem to ameliorate or exacerbate the condition. All of this should be related to what one knows of the nature of sensitivity in general and local antigenic factors in particular.

The Allergic Index

As an indication of the wide variety of possible early symptoms of allergy, which, when present, may help in diagnosis, I refer you to the Allergic Index*, a table of symptom-weight values formulated so as to simplify the recognition of hypersensitivity. A history which includes questions specifically directed toward eliciting information relevant to these conditions may help significantly in revealing the presence of active allergic disease. In allergy, it is usually fruitful to interpret the present in terms of the past.

As part of the history, one should always seek specific information on any pattern of recurrence or periodicity which may be associated with the illness. If symptoms appear at the same time during two or three years, or if they seem to disappear at about the same time, an allergic factor is evidently present. Of course, some allergic illness will not reflect a seasonal factor.

Following the history, physical examination may help clarify the illness. If one is faced with a child during the active phase of his symptomatology, any or all of the following may be evident: itchy or reddened, weeping eyes, rhinorrhea, paroxysmal sneezing, episodic bouts of coughing, rattling or noisy, heavy breathing, or frank wheezing.

Once the history and physical examinations are completed, specific antigenic skin tests are used to further pinpoint offending substances which may be playing a causative role in the presenting symptoms. The basic skin test used today is the scratch test—a safe and usually informative diagnostic test. However, negative scratch tests do not necessarily mean absence of allergy: thus, if the history is positive—or suggestive—intradermal tests should be employed. These make use of stronger antigenic solutions and thus may give positive results after negative scratch tests. Of course, no antigen should ever be injected intradermally without first having been screened in a scratch test.

Positive skin tests may indicate present, past, or future clinical sensitivity, and so must be correlated within the framework of the patient's history and the physical findings in order to be an accurate guide to therapy.

The most rational treatment of allergy is to prevent contact between the offending allergens and the sensitized patient. Since this is a practical impossibility in most cases where the offending substance is a pollen, treatment is directed toward creating a state of tolerance in the patient toward the substance to which he is at present intolerant. This is accomplished by introducing gradually larger amounts of the offending antigen into the patient's system—that is, hyposensitization—and thus stimulating the formation of blocking antibodies specific to the offending substance.

In many cases of respiratory tract allergy in children, multiple positive skin tests will be found. Clinical evaluation of these findings along with the patient's history and results of the physical examination will lead to a proper decision regarding the specific program of hyposensitization. When multiple exciting substances are involved, a separate program of hyposensitization must be set up for each. Mixing and administering different antigens in the same syringe is to be avoided, since this prevents proper evaluation of possible local or systemic reactions.

Pollen treatment must be repeated yearly to give protection. Otherwise, protection usually disappears some months after treatment is discontinued. To maintain a high level of immunity, many allergists practice perennial hyposensitization treatment.

Successful hyposensitization is usually possible if the following points are emphasized:

1. Correct diagnosis and exact clinical history.

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*The author's ALLERGIC INDEX, *Table of Symptom-Weight Values* may be obtained from the Journal on request.

2. Use of potent extracts, with a sufficient number of doses injected at adequately spaced intervals to reach the threshold of tolerance or the optimum protection dose.
3. Care in avoiding overdose.
4. Recognition and successful treatment of other sensitization which the patient may tolerate throughout the year but which may intensify the pollen symptoms during the season. Such antigens include animal dander, feathers, dust, insect powder, molds, orris root and foods.
5. Recognition and successful treatment of the complicating effect of respiratory infections, particularly in the sinus area in some children.

There have been repeated attempts to modify and improve the accepted form of perennial treatment of pollinosis. The most recent of these is repository injection of pollen in mineral oil. The same principles apply to repository therapy as have been noted with aqueous therapy, i.e. the need for an adequate history, physical examination and diagnostic skin tests. It is not yet known whether repository treatment will yield results equal to or better than those available with aqueous treatment.

In the field of allergy it has become especially easy to overuse drugs—not only because many new palliative medications have become available, but also the proper treatment of allergy is often a difficult, long-term affair, requiring constant attention and persistent measures.

This is unfortunate, for two primary reasons. First, it focuses completely on relief of symptoms—as if this were an end in itself—and ignores the basic etiologic mechanisms of this progressive condition.

Secondly, in our desire to palliate symptoms, we sometimes overlook the fact that drugs themselves may do harm: in unwanted side effects and toxic reactions, in rebound phenomena, in masking the chronic and progressive nature of the illness, even in impairing the body's own defenses against allergic assault.

Drugs do have a role to play in the overall management of the allergic patient. That role can be important, but it is a supporting one.

Drugs Play A Supporting Role

The most widely used palliative drugs in allergy are the antihistamines. Many are sold directly to the public for symptomatic relief of allergic conditions, many are promoted heavily to the medical profession for the same uses. Antihistaminic drugs are capable of antagonizing many, but not all, of the pharmacologic actions of histamine. In so doing, they can modify allergic and anaphylactic reactions. This property provides the basis for their application in allergic disease.

Among respiratory allergies, antihistamines have given best results in relieving the symptoms of seasonal hay fever. Relief is most pronounced in the weeping phase. In perennial allergic rhinitis, results of antihistamine treatment are usually inadequate, probably due to the greater incidence of nasal obstruction. Antihistamines are not effective and have no place in the treatment of bronchial asthma. Because of their atrophine-like drying action, they may predispose to further complications resulting from plugging of the dried secretions.

Generally, antihistamines give the most satisfactory results in the relief of acute urticaria—the anti-pruritic effects, the sedative action, and the prevention of new lesions are noticeable.

Although antihistamines are usually considered quite safe, they are not without undesirable and toxic reactions. Sedation is the most common side effect. Occasionally antihistamines may cause restlessness, nervousness, and insomnia, even at the recommended dosage.

Abuse of antihistamines in hay fever can lead to serious complications. Although these drugs may provide relief of the symptoms, they do not alter the natural progression of the disease. Immunologically speaking then, hay fever patients being treated with antihistamines are not being treated. It is known that at least five children out of ten with untreated hay fever later develop pollen asthma, whereas asthma seldom develops in a child whose hay fever is being managed by means of hyposensitization.

The Role Of Antihistamines

The principle is worth remembering: antihistamines in hay fever provide palliative relief only. The child being treated with antihistamines *only* is, *immumologically, not being treated.*

Epinephrine is one of the most potent bronchial antispasmodic agents and as such, is one of the most important drugs for the symptomatic treatment of bronchial asthma. Epinephrine is also of value in many miscellaneous types of acute allergic disorders, such as acute urticaria, angioneurotic edema, serum reactions and allergen overdose. One must remember that the smallest effective dose of epinephrine should be employed, not only because tolerance may develop with larger doses, but also because untoward side effects are more often noted. Nervousness, tachycardia, headache, extrasystoles, abdominal pain and vomiting are common.

Epinephrine should be reserved for relief of the acute asthmatic attack and other measures should be used for the mild symptoms of wheezing or for protracted therapy.

Other adrenergic drugs have been used extensively in lieu of epinephrine. These include ephedrine, isoproterenol, and aminophylline. In selected cases these compounds may have certain pharmacologic advantages over epinephrine, i.e. different duration of action, different patterns of unwanted effects and variable routes of administration.

The value of phenylephrine in allergy is due to its highly effective vasoconstrictive properties when applied topically to the nasal mucosa. Ironically, it is this high degree of decongestant effectiveness which causes such widespread abuse of the drug by the patient.

Because phenylephrine produces such prompt shrinkage of the congested nasal mucosa, patients tend to use products containing it at too frequent intervals and for prolonged periods of time.

Although the adrenocortical steroids have been used for symptomatic therapy of allergic disease for the past 15 years, they still occupy a controversial position. They are both effective and hazardous, and recognition of this fact, coupled with an understanding of their mechanism of action, should enable us to utilize the steroids intelligently with a minimum of danger to the patient.

The corticosteroids suppress many of the signs of inflammation, including those associated with infection. The corticosteroids suppress toxicity, subdue inflammation and may prevent the development of severe allergic reactions, but they should be administered with appropriate chemotherapeutic drugs if infection is present or threatening. Patients on corticoids have a reduced resistance to viruses as well as to other infectious organisms. This increased susceptibility of patients on steroid medication to infection by many common pathogens has been underscored recently. It has even been suggested that "hospitalized patients taking adrenal corticosteroids should be isolated" and that even outside the hospital, such patients must carefully avoid any exposure to any suspected infectious disease.

Since virtually all patients with allergic disease can be benefited symptomatically by steroids, the temptation to overuse them is great. The physician must decide with care when to use them.

Guide For Steroid Therapy

1. Status Asthmaticus.

2. In chronic asthma, steroids should be the last rather than the first choice of treatment. Their use should be restricted either to those patients whose symptoms are severe during preliminary investigation and can be controlled by no other means or to those who have failed to respond to conventional allergic management. In these instances, corticossteroids offer palliative relief. Once steroid control is achieved, it should be maintained at the minimum dosage level which keeps the patient comfortable. Attempts should be made to wean the patients by tapering off the dosage in step-like fashion. The effectiveness of ACTH at this stage to stimulate

the adrenal gland has not been proven and is questionable.

The prolonged use of corticoisteroids alone is always an admission either of failure to determine the causal allergen or lack of positive therapeutic response to hyposensitization management. Seasonal asthma rarely necessitates steroid therapy.

Recently steroids have been incorporated into inhalation devices for use in bronchial asthma. Only 50 per cent of the medication reaches the lungs by this method. The balance is swallowed and can produce generalized as well as local effects. Moreover, demonstrable adrenal suppression may follow only 24 hours of aerosol steroid therapy, so that even this apparently innocuous method of treatment is attended by potential dangers.

3. Allergic dermatoses, such as angioedema, urticaria, erythema multiforme and allergic dermatitis all respond well to steroids. However, steroids are not a substitute for basic treatment and, when indicated, should be used as supplemental therapy. They do not modify the natural course of the illness.

Some of the severe hazards to corticosteroids are:

1. Retardation of skeletal maturation and statural growth during use.
2. Cushing's syndrome—this is usually reversible if dosage of steroids is decreased or the drug discontinued.
3. Peptic ulcers and several cases of periarteritis nodosa have been reported.
4. Asthmatics who have had long-term corticoids become psychologicaly dependent on the drugs to keep themselves well. Weaning these patients is most difficult. The patients, fearful and apprehensive of reverting to their former severe state, are virtually enslaved by the steroids. This is akin to drug addiction.

Actual physiological dependence on the steroids may also occur, and relapses after withdrawal may be more severe than the previous asthma. Withdrawal symptoms, consisting of headache, malaise, vomiting and joint pains are similar to those of a mild adrenal crisis.

Prior to the availability of steroid therapy, deaths in children from asthma were almost unknown. However, during the past decade, many sudden deaths have been reported in asthmatic children who had previously been under intensive steroid therapy for prolonged periods. In some instances, steroids had last been given 6 to 12 months before death. There has been no adequate explanation for these deaths—but it seems that the steroids were involved in some way.

Other drugs, less specifically indicated in the symptomatic treatment of allergic states, have been used extensively and unwisely in recent years. These include antibiotics, aspirin, barbiturates and tranquilizers. Indications for these drugs in general practice are well known—and they should not be used any differently in the allergic patient. In other words, antibiotics are to control infections, aspirin for pain etc.—not for allergy.

There is considerable confusion, and the possibility of considerable harm, among many members of the medical profession in regard to the relationship between bronchial asthma and asthmatic bronchitis.

The most recent edition of Holt's *Pediatrics* refers to "asthmatic bronchitis" as a condition in infants and young children in which the "asthmatic syndrome"—that is, dyspnea, wheezing, and obstruction of the finer bronchioles—is seen in conjunction with respiratory infections.

It is my contention that there is no such thing as "asthmatic bronchitis," but that what we are describing here is nothing less than the early manifestations of bronchial asthma, allergic in nature, immunologic in etiology, the result of an antigen-antibody reaction in symptomatology, and frequently susceptible to control by the classic tools of the allergist.

In allergy, there are two types of hypersensitivity— immediate (anayphylactic) and delayed. We are all familiar with such examples of immediate hypersensitivity as the urticaria, angioedema and wheezing which may follow the ingestion of egg by an egg sensitive child, or the prompt respiratory symptoms experienced by the hay fever patient when exposed to a large dose of ragweed pollen. Although we are perhaps not equally at ease with the complex nature of delayed hypersensitivity, some of its manifestations, such as the familiar reactions to poison ivy or penicillin, are commonly encountered.

Delayed Hypersensitivity

Raffel has offered five criteria for establishing the immunologic or allergic basis of delayed hypersensitivity:

1. An antigen, usually a foreign-body protein, sensitizes or primes the cells, thereby inducing the hypersensitive state.
2. An induction (or incubation) period of at least seven to ten days passes, during which time antibody is produced.
3. A subsequent exposure to the same specific antigen elicits a local and/or systemic tissue reaction.
4. Cellular memory, i.e., further exposure to the same specific antigen after a prolonged interval, will cause a similar tissue reaction, even though the level of hypersensitivity decreases significantly during this time.
5. Hyposensitization, or the therapeutic induction of tolerance to offending antigens, can be effected.

As a matter of interest, there are also five factors which serve to differentiate the delayed type of hypersensitivity from the immediate type:

In the delayed type:

1. A relatively lengthy interval occurs between exposure to the shocking antigen and the appearance of clinical manifestations. This interval could be several hours or more, with the peak usually from 24 to 72 hours following exposure.
2. Circulating antibody is not demonstrable, as it is in the immediate type, by the transfer of the hypersensitive state to a normal recipient.
3. There are no specific shock tissues in the smooth muscle blood vessels or collagen, as there are in immediate reactions.
4. Heredity is less important as a predisposing factor to delayed hypersensitivity.
5. One type of sensitivity can be abolished without affecting the other. For example, it is possible to complete successful hyposensitization of the immediate type of hypersensitivity while leaving the delayed type intact. Thus, the two types of hypersensitivity are evidently mediated by different mechanisms.

Perhaps the most common example of delayed hypersensitivity, however, is that which occurs in infectious processes. Raffel states: "Delayed allergy is a characteristic response of the body in various infections . . . " Among the chronic basterial diseases, manifestations of hypersensitivity are most striking in tuberculosis—where, indeed, the tissue injury resulting from hypersensitivity plays a considerable part in the pathogenesis of the disease. The presence of hypersensitivity in tuberculosis is readily demonstrable by use of the well-known tuberculin skin test.

Among the known forms of clinical allergy, one which is recognized and treated less frequently than most is bacterial allergy, i.e., hypersensitivity to bacteria or bacterial protein. Although bacterial allergy is difficult to confirm by skin or other diagnostic tests, other clinical factors—such as the individual history of the patient and the consistent association of allergic symptoms with the presence of infection—are usually sufficient for correct diagnosis.

Bacterial allergy falls into the category of the delayed hypersensitivities. What we have referred to above as "asthmatic bronchitis" or "bronchitis with wheezing" is, in actuality, a classic example of bacterial allergy.

In so-called "asthmatic bronchitis," the offending antigen is a microbial organism, most often one of the common etiologic factors in upper respiratory infections, which acts to sensitize the respiratory tract on its initial exposure. Clinically, manifestations of this initial exposure are limited to the upper respiratory tract and, in quality, are those of the common cold.

The induction of incubation period in "asthmatic bronchitis" usually passes without clinical notice, except in children who are particularly susceptible to colds. The incubation periods of other infectious diseases with hypersensitivity components are well known—for example, eight to 12 days in measles, 14 to 21 days in chicken pox, eight to 12 days in small pox, 14 to 21 days in mumps. The minimum length of the incubation period in "asthmatic bronchitis" is seven to ten days. Its maximum length cannot be fixed except in terms of the time required for the individual patient to develop clinical sensitization to the specific bacterial antigen. Conceivably, this might not occur in less than two successive winters.

Once clinical sensitization is established, the next significant exposure to the specific bacterial antigen will evoke a violent allergic response. In so-called "asthmatic bronchitis," this response takes the form of spasmodic coughing and/or wheezing. As I have stated above, the resultant respiratory difficulty is usually your first exposure to this clinical situation.

Most of us can refer to our own practice and find cases of this sort where intervals of a year or more elapsed between two such episodes of infectious disease accompanied by wheezing. This, of course, is a result of cellular memory functioning as part of the hypersensitive state.

The final element in Raffel's definition of delayed hypersensitivity is the ability to successfully hyposensitize the patient against the offending antigen. Although hyposensitization is more complex and time-consuming in bacterial allergy than in some other allergies, dramatic results can sometimes be achieved and the technique, as a technique, has validity.

Further confirmation of the immunologic basis of "asthmatic bronchitis" can be obtained if we view it alongside the accepted definition of bronchial asthma. Bronchial asthma is defined as a symptom complex consisting of retrosternal oppression, recurring dyspnea, and wheezing, more pronounced in the expiratory phase of breathing (sibilant and sonorous rales), resulting from an antigen-antibody (i.e., allergic or hypersensitivity) reaction. These symptoms are triggered by sensitization and subsequent exposure to inhalants, foods, injectants, drugs, or infecting microbial organisms, or by any significant assault on the sensitized respiratory mechanisms or body by external irritants or physical or emotional stress. The bronchiolar pathology in bronchial asthma consists of edema, hypersecretion and spasm of the smooth muscle layer.

Asthmatic Bronchitis vs. Bronchial Asthma

How, then, does "asthmatic bronchitis" difwith bronchial asthma? In symptomatology, the two are identical, being marked by retrosternal oppression (although this is not usually a complaint in the younger child), recurring dyspnea, and pronounced wheezing in the expiratory phase (sibilant and sonorous rales). The pathologic findings—edema, hypersecretion, and smooth-muscle spasm—are also identical. In etiology, "asthmatic bronchitis" is the result of an antigen-antibody reaction in which the offending antigen is an infecting microbial organism.

How, then, does "asthmatic bronchitis" differ from bronchial asthma? Traditionally, the only clinical differences noted have been differences of degree—in fever and in violence of manifestations. These differences may be attributable merely to the varying ages of the patients involved. In any event, at this early stage in the development of the condition, patterns have not been established firmly enough to draw significant conclusions in terms of the disease itself.

Some physicians in general practice are of the opinion that their young patients will outgrow "asthmatic bronchitis." I would be hard pressed to estimate the number of cases of bronchial asthma I have treated—whose parents had been told that their children would soon outgrow their "asthmatic bronchitis."

Bronchial asthma, considered dynamically, can be divided into three distinct phases.

1. Respiratory or retrosternal oppression. This is a subjective symptom, of which only older children may complain. Thus, it is seldom a significant factor in bronchial asthma

in the younger child. It consists of a sense of tightness or heaviness in the chest, along with difficulty in drawing a deep breath. No wheezing is audible at this stage.

2. Wheezing or pre-attack phase.

This stage of bronchial asthma sometimes appears insidiously after repeated upper respiratory infections, or it may even appear concurrently with such an infection. In other instances, wheezing may develop suddenly and persist for several days, at which time upper respiratory infection becomes manifest. Symptoms during this stage of bronchial asthma are varying degrees: at first they are not too troublesome; later, as the disease progresses, they intensify. During this phase, the symptom (wheezing) is principally referable to the variable bronchitis, moist and dry, sibilant and sonorous rales heard in the chest. Dyspnea may be so mild as to escape attention, or it may be pronounced. Symptoms may or may not be related to seasons of the year. During intervals of remission, there may be coughing, some wheezing, or complete freedom from symptoms.

It is this phase of bronchial asthma, the wheezing or pre-attack phase, that is frequently erroneously labeled "asthmatic bronchitis."

3. The attack phase.

The attack stage represents the peak of the asthmatic syndrome; it presents the classic picture of bronchial asthma and as such is easily recognized. The asthmatic attack usually has an acute onest and may last for a few hours or for several days. The most striking aspect of the asthmatic attack is the pronounced wheezing during the expiratory phase of breathing. This, along with the characteristic posture and marked dyspnea, permits ready diagnosis. The wheezing, often easily heard at a distance, has been characterized as "music."

In closing this part of the discussion, let me repeat the words of Herxheimer: bronchitis is a symptom of asthma. There is no such thing as asthmatic bronchitis.

All allergic disease has an immunologic basis, that is, it is the damaging result of interaction between the host and an invading foreign substance to which the host is sensitive or 'allergic.'

That Significant Emotional Component

However, it is now generally accepted that, in common with a number of other somatic disorders, allergy may have a significant emotional component. This may range from the moderate fear and anxiety associated with the appearance of any mysterious illness to a formidable mixture of guilt, anger, depression, and rejection that can upset the patient or his family to a major degree. Although emotional factors cannot be considered as bearing on the etiology of allergic illness, they can—and frequently do—trigger specific allergic crises where none would have otherwise appeared. This is seen most dramatically in children with bronchial asthma, but any manifestation of allergy in any organ system can be triggered or exacerbated by emotional factors.

Perhaps the most obvious emotional component in an asthmatic situation is anxiety on the part of the patient and the patient's family. This anxiety may be simply a manifestation of lack of knowledge and the need for reassurance. The physician dispels the ignorance in his discussion of allergy in general and the specifics of the case in particular, and provides the needed reassurance, at least in part, by the very fact that he is taking an interest in the case, the history, the treatment program, etc.

Associated with this anxiety is fear— fear not only of the unknown, but fear of disease, of pain, and particularly when severe asthma is present, fear of imminent death.

As time passes and the chronic nature of the illness becomes clear to the patient and his family, other emotional factors begin to intrude. The patient may deny his illness, or minimize its importance, once he realizes that it is depriving him of things he may want. Open resentment and rebellion may develop—directed not only at the parents who somehow "caused" the problem, but also at more normally healthy siblings or even at the other adults in the household.

On the other hand, the patient may find the increased care and attention gratifying and so may capitalize on his condition. Siblings, jealous of this added attention, may develop hatreds and resentment. Parents, too, may feel resentment on any of a number of bases—economic, because of the cost of treatment or of special changes necessary in the home; social, because of the limitations of activity imposed on them by the presence of a chronically sick child in the house; even familial, because of the disruption of their "happy" family life.

Compensations Offered By Parents

Parents confronted with a chronically ill asthmatic child requiring special attention and, particularly, severe restrictions, sometimes attempt to compensate to the child for his restricted life. This may take the form of overprotection, in which the parents' legitimate desires to save the child further physical or emotional embarrassment, may lead to a virtual suffocation of the child with attention, special foods, medications, 'treats' of all sorts. Along with this added attention usually comes unnecessary restriction of action which unfortunately serves only to further demoralize the already insecure child.

Children generally do not want to be different and certainly no child wishes to be burdened with a chronic illness. Admission of such a condition may act to destroy the child's perfect image of himself and his indestructability; thus, some allergic children refuse to accept a diagnosis and plan of treatment which would require of them a far greater degree of maturity than they possess. Of course, this denial of illness may have far deeper significance—in fact, it usually does.

In some instances, children with chronic illness learn to exploit their condition so as to be able to manipulate their environment to suit their needs. On a simpler level, you are all familiar with the child who precipitates a temper tantrum when he fails to achieve his desires. Similarly, some children will complain of feeling ill when their parents are preparing to go out in the evening. Although these illustrations are sometimes bonafide, more often they represent an attempt on the part of the child to induce one or both of the parents to stay with him and not leave him alone—or an attempt to interfere with the parents' activities.

This interference may have its basis in an Oedipal wish to intrude between the parents and to take the place of the hated one in a close or intimate relationship with the desired adult. Ample documentation exists of children with severe intractable asthma who frequently will suffer repetitive attacks of asthma in the late night or early morning hours—so that one parent must remain in the child's room through the night and so be separated from the other.

In some cases the very young asthmatic child fails to get adequate relief until he has induced the desired parent to join him in bed. The relative frequency of this occurrence has been noted in sessions of group therapy as well as in private psychiatric hours. However, it takes two to make a bargain; and one must assume that the involved parent, too, may be expressing an excessive emotional interest in cooperating in this activity.

The child with chronic allergic illness is subject to feelings of resentment on an unconscious as well as a conscious level—directed not only toward the parents (usually the mother), but also towards siblings and friend. This resentment bears a dynamic relationship on a deeper level to anger and rage. Since the patient is emotionally incapable of accepting responsibility for his illness, and since someone must, he blames the parent for making him inherit his condition.

At the same time, the parent is ostensibly free to come and go, not restricted or hampered by illness, not struggling for air, not having anxious moments or trouble in sleeping —indeed, not at all sharing the very illness for which she is responsible.

On the side of the parents, too, (particularly the mother), unexpressed resentment, anger and rage are felt. At the root of such feelings are many possible factors: that the child and his illness should have come between her husband and herself, that the child may have succeeded in playing one parent against the other to its own advantage, that she has had to spend countless hours at the child's bedside in order to keep the illness under control, that she has had to take the child to one physician or clinic after another—that her seed should have given rise to an imperfect fruit.

In our society, however, it is not permissible for a mother to entertain or express such feelings. Thus, the anger and resentment are often turned inward. Frequently, in order to disguise these feelings of hostility, the mother overprotects and 'smothers' the child with love and affection. In doing so, of course, she may very well do more emotional damage to the child than if her unconscious thoughts had somehow found a means of free expression.

The father, too, is subject to feelings of resentment and anger—at losing the company of his wife, at the seemingly endless financial drain of the child's illness, at constantly finding his wife exhausted at the end of the day, at the frequent interruption of his activites. It is only slightly less damnable in our culture for the father to harbor such feelings than the mother.

Neither parents finds it easy to accept the blame or responsibility for the ill child. The impact of chronic illness can disturb the equilibrium of the entire household—even on occasion to the point of breaking up the home.

Many aspects of the treatment of chronic allergy act to create difficulties and tension in some allergic children—the fact that management is not always totally or even significantly successful, the constant need for medication or injections, the restriction of normal activities, the feeling apart and somehow stigmatized. In their turn, these difficulties can aggravate and complicate the course of the illness.

Thus, it can be seen not only that the child with chronic allergic disease must be the very nature of his condition suffer sometimes serious emotional changes, but also that these very emotional factors in their turn may have a 'playback' effect—that is, they may further exacerbate the very illness which was their cause.

In closing this necessarily brief review of some of the highlights of the recognition and treatment of allergic disease, I am aware that there are many gaps in my discussion of this complex, challenging illness. One point which should be stressed is *attitude*, for your attitude in approaching and coping with this chronic disease entity can be the crucial difference between a successful outcome and failure of therapy. One must learn to be receptive and tolerant, to try to understand the patient's total needs, emotional as well as immunologic, and to be persistent.

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AN INQUIRY INTO THE HEALTH OF MR. LINCOLN

(*Continued from Page 106*)

brain. Both the orbital plates of the frontal bone were fractured, and the fragments pushed up toward the brain. The dura mater over these fractures was uninjured. The orbs were gorged with blood."

With this description it is obvious that Lincoln's life could not have been saved by any human effort. It was a mortal wound.

Summary

Lincoln's life could not have been saved by any human effort then or now. He could well have been a Marfan Syndrome Sufferer—the source of it in his lineage requires more study. If the man Lincoln was a psychopath, God grant that this race shall not perish from the earth.

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AN INQUIRY INTO THE HEALTH OF MR. LINCOLN

• This monograph on the health angle of Lincoln poses the question, "Could his life have been saved by modern medical techniques after he was struck by the assassin's bullet?"

Fenton Russell, M.D.

Three medical questions arise with regularity regarding Mr. Lincoln: (1) Was he mentally unbalanced, (2) Was he a Marfan Syndrome Sufferer, and (3) If he could have had the benefit of modern medicine and surgery, could his life have been saved?

There has been more written about Lincoln than any other individual in the known account of time. He has been presented to the world from every angle of view. The big problem in reviewing the literature is separating fact from fiction. Fable invades the biography of all great men. Actually, with all the weath of available literature, there is precious little medical information recorded. This is probably because the Lincoln family had little need of medical care.

The best place for an inquiry to start is at the beginning. Lincoln's heredity, then, should first be considered. "There is nothing in his ancestral history that would cause a director of an insurance company to hesitate to issue a policy on Mr. Lincoln."[1]

His paternal grandfather was in robust health when he was killed by Indians at the age of 42. His paternal grandmother lived to be 100 years. His father, Thomas, reported to be totally free of hereditary disease, lived to the age of 75 years.[1] The maternal side of the lineage is not so clear. The evidence who the Hankses were is not too reliable. Lincoln's mother, Nancy Hanks, died at the age of 37 from a mysterious illness called the "Milk Disease," which was epidemic in the area at the time. Milk disease is described as an illness produced by milk from cows feeding on "white snakeroot plant" and "rayless goldenrod weed."[3] Abraham was delivered by a midwife in the Lincoln's single room cabin on Sinking Spring Farm in Kentucky,[1] and, no doubt, the OB service was skilfully done. Other than his sieges of melancholy and depression, Lincoln had relatively few bouts with illness and accidents. These can be related briefly. On one occasion in his youth he nearly drowned, and a few years later he was kicked unconscious by a horse—sustaining injuries that could have been fatal. On another occasion he had his feet frozen when crossing the Sangamon River.[1] It is conceivable that Lincoln in his developing years may have been confronted with some nutritional deficiencies (such as rickets), for a frontier diet in those early days was certainly limited and unbalanced, not to say deficient. It is reported that in his teens he did "grow fast and larger and develop a powerful frame."[1] This could have been an overactive pituitary gland at puberty, though there are no known records to sustain this opinion. Lincoln's appearance always suggested a potential tuberculosis. If a more complete autopsy had been done, this condition could have been determined with certainty. In 1860 he was "treated for a severe sore throat," probably Quinsy. On his return from Gettysburg, following his

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Dr. Russell, retired Associate Medical Director of the Du Pont Company (Petroleum Chemical Division), is the author of several books and is interested not only in Lincolniana but in all history, medical or otherwise.

famous address in November of 1863, he became ill enroute on the train, diagnosed as varioloid. He was bothered with the great American affliction—chronic constipation. He had faulty vision known as heterophoria. He bought his first "spectacles" at the age of 48 years.[1] He also had corns and callouses. This appears to be the sum total of his illnesses.

Some prescriptions given to Lincoln by Dr. Wallace in Springfield, Illinois are extant. None of them are of any special interest except one, for a compound called "Dead Shot," to be used to exterminate the "Cimex Lectularious" (bed bugs)!

In Dr. M. H. Shute's book, "Lincoln and the Doctors," are names of 122 physicians that Lincoln knew, but there are only three or four of them who have an account of Lincoln as a patient. Dr. John Allen and Dr. Anson Henry were the constant medical attendants, and life-long friends of the family. Dr. Robert Stone was the White House physician during the presidency. Dr. Stone was a Democrat and an unfriendly critic of the president.[1]

Lincoln's Melancholy

All the recognized authoritative writers refer to Lincoln's melancholy, and give specific details of his attacks of depression. Herndon wrote that "Lincoln was a sad-looking man, whose melancholy dripped from him as he walked," and Lincoln himself told Representative Wilson of the Illinois Legislature "that although I appear to enjoy life rapturously, still I am a victim of terrible melancholy."[1] Dr. Gerald Gordon, an eminent psychiatrist of Pennsylvania, suggests that the diagnosis today of Lincoln would more likely be "cyclothymic personality" than a clear cut psychosis in which episodes of reactive depressions are evidence in themselves.

In analyzing the circumstances surrounding Lincoln's recorded episodes of depression, it is difficult to regard them as pathologic because there were always predisposing factors present to account for the crisis. The cited depression invariably followed a political defeat or a reversal of some kind, a death of a friend, or a member of his family. Actually, it would have been highly abnormal for him to have reacted in any other manner. It is not normal to be jubilant over adversity; let it be noted in this connection "Lincoln's was a spirit who sought and maneuvered for public place." He was religious, but not "churchy."

One of the first recorded accounts of depression is given by Dr. Duncan of Springfield, Illinois in 1833, a condition which followed Lincoln's political defeat for the Illinois Legislature! The next recorded account "played up" is his alleged crisis following the death of Ann Rutledge. Dr. John Allen, however, proved this report untrue. At the time of Ann's death, Dr. Allen was treating Lincoln as a patient for Ague (Malaria); the illness had nothing to do with Ann or melancholia.[1] In fact, the entire Ann Rutledge romance has been fairly well shattered by recent investigators as being a myth fabricated by Herndon.

One of the most severe attacks of depression followed his broken engagement with Mary Todd. Lincoln did not appear for his wedding scheduled for January 1st, 1841.[1] This story has received much play in current magazines. According to Herndon, Lincoln's law partner, "Lincoln was deeply despondent and incoherent for at least a week,"[1] at the time. In a very discouraged letter to Senator Stuart dated January 23, 1841 Lincoln wrote, "I am the most miserable man alive. To remain as I am is impossible. It appears to me that I must die, or be better."[1] With the help of Dr. Henry and Lincoln's only intimate friend, Joshua Speed, Lincoln did recover rapidly. In connection with this episode Carl Sandburg (et al) conclude that there was really no defaulting bridegroom, but that some violent disturbance did occur to Lincoln. It has been suggested that what did occur was the nuptial date had been "pressurized" by Mary.

Lincoln, who was a highly sensitive person, was conscious of his deficiencies in the social graces, and his lowly estate with a link in his near ancestry missing. Whereas, in contrast, Mary Todd was from an old, distinguished, and well-to-do family of Kentucky, and part of the socially and politically prominent Edwards family of Illinois. In other words, she was of the aristocracy of the hour. It was inevitable that shy, conscientious, introspective, sensitive Lincoln should develop fear and forebodings.[1]

Lincoln, like many other men before him and after, caught in a similar role, did not wish to be rude, or hurtful; rather, he wanted to be chivalrous, but as a fair-minded person, he had difficulty in reconciling the complexities mingled with compulsions of his desire and ambition, on the one hand, and the wide gap in their separate spheres of life,[1] on the other. Naturally, an emotional conflict was bound to result within Lincoln. In short, he wanted to go through with the marriage, but what bothered him deeply was—would it be fair to the lady? In the weeks following this experience, Lincoln "sank into deep despondency."[1] It was Dr. Henry and Joshua Speed who finally "pulled him out of it" as stated before, and eventually it was Dr. Henry who brought "these two people (who were so divinely created to irritate each other, were also constituted in such fashion as to be necessary to each other's comfort and peace!)[1] together again, resulting in their marriage November 4, 1842.

Another instance of severe depression is reported during the first year of residency in the White House. In that year three sudden deaths occurred that unnerved the entire household.[8] The first death was that of Col. Elmer E. Ellsworth, a young protege of the president, who lived as a member of the family in the White House. Then an old Illinois friend, Col. Edward Baker was killed in battle, and in February, 1862, Willie, the president's most promising son died suddenly of "fever." At the death of Willie, the president went into solitary seclusion, shutting off family and friends.[1] Oft times the greatest expression of sorrow is silence. The attractiveness of life became dulled also for Mrs. Lincoln,[1] and from this hour she became mentally unhinged. The death of Willie was a severe, shocking blow to the president, and it darkened the White House for months. Lincoln indeed, was a man of sorrow and acquainted with grief.

Yet with it all, Lincoln withstood the ravages of strength-sapping cares and duties of the presidential ordeal, and his mental resources were adequate to meet problems and make momentous decisions for four harrowing years.[8] John Bigelow, a contemporary, writing in the New York Evening Post, said in part, "He has a clear and eminently logical mind, and a nice sense of truth and justice."

Psychiatric study of Lincoln's character and career will always be interesting, and the quest shall go on. Dr. L. Pierce Clark, in his brilliant paper to the New York Psychiatric Society, diagnosed Lincoln as a psycho-neurotic, but Dr. Pierce insisted that phase of Lincoln's character went into the mosiac of his intensely interesting personality, and was an indissoluble part of his greatness.[1] After all, a large share of the world's work and much of its best work has been done by psycho-neurotics.

Marfan Syndrome Sufferer

What did Mr. Lincoln look like? Even his closest friends found him an enigma, thoroughly inscrutable. Here was their great friend:

A homey philosopher—yet a hard-headed trial lawyer.
At once a humanitarian—but driving ahead in history's bloodiest war.
A teller of yarns and jokes—but a sad, shy person with deep depressions.
A man without formal education—yet a brilliant politician and first-rate military strategist.

Quite recently, Dr. A. M. Gordon, in a medical monograph, reduced Lincoln's appearance to one sentence.[6] He classified Lincoln as a Marfan Syndrome Sufferer. The Syndrome is named after the man who first described it, Antonin Bernard Jean Marfan (1858-1942), who was an obscure pediatrician of Paris, France.[9] Care should be taken not to confuse Marfan Disease and Marfan Syndrome. In 1896 Marfan described the Syndrome as an hereditary disorder of the mesenchymal tissue[6] affecting the eyes, the heart, and skeletal structures—the skeleton being out of proportion. The detailed description of the Syndrome has been printed in numerous publications recently, and will, therefore, be omitted here.

Lincoln is described by Herndon,[1] et al, as tall, lean and lanky (6'4" tall, weighting 170 to 180 pounds), with a shambling, loose, irregular gait, stooped shoulders, and long, pendulous arms terminating in hands of extraordinary dimensions (wore size 10 gloves), which were far exceeded in proportion by his feet (needed size 16½ shoe). He was rawboned, with dark, wrinkled skin, thin and sinewy, narrow across the shoulders. When he walked his long arms and giant hands swung down by his side—he put his whole foot down flat on the ground at once, not landing on the heel first, simulating an Indian gait. There was no spring in his step. His legs and arms were abnormally long and in undue proportion to the remainder of his body. One contemporary wrote "that Lincoln resembled the offspring of a happy marriage between a derrick and a windmill." Apparently, Lincoln was not too sensitive about his appearance, as he often made jokes himself of himself.

Lincoln fits into the Marfan Syndrome description fairly well, but not in all particulars. In the first place, Lincoln was not weak but, rather, he was strong in muscle as in character. He had an eye defect diagnosed as Heterophoria, and it was not until he was 48 years old[1] that he found it necessary to obtain visual aid. He was not known to have any cardiovascular disease, but he may have had a healed T.B. lesion.

Lincoln's Maternal Line

In 1962 Dr. A. M. Gordon of Louisville, Kentucky attributed the dominant source of Lincoln's genetic make-up to the maternal line, through his mother, Nancy Hanks.[6] The Sparrow family into which Nancy's mother Lucy, married after Nancy was born has produced 5 successive generations of Marfan Syndrome Sufferers. There are 4 members of this family now living in Louisville, Kentucky.[6] In a more recent publication (JAMA February 15, 1964, Vol. 187 #7) Dr. Harold Schwartz presents genealogic evidence that suggests the source of the Syndrome is found in the *Lincoln* lineage. To substantiate this Dr. Schwartz presents a pedigree chart in which he traces the lineage of his 7 year old Marfan patient, and Abraham Lincoln, back to a common ancestor, one Mordecai Lincoln, II (b. 1686). Most interesting contribution.

The question, if Lincoln could have had the benefit of modern medicine and surgery, could his life have been saved, has been reviewed and discussed by great authorities for a long time. The president survived the shooting about 9 hours, a fact that has caused some surgeons to believe that a patient with such stamina could have been saved with prompt and know-how surgery. There was nothing done for the patient medically except to place unsterile fingers into the wound to remove clotted blood. A review of the autopsy report by Drs. J. J. Woodward[2] and Curtis submitted to Dr. Barnes, the Surgeon General, on April 15, 1865 may be helpful in deciding this question. Unfortunately, the autopsy was limited to recovering the bullet and describing its course in the brain.

Post Mortem Report to Surgeon General Barnes (Abbrev.)

"The eyelids and surrounding parts of the face were greatly ecchymosed and the eyes somewhat protuberant from effusion of blood into the orbits. There was a gunshot wound of the head around which the scalp was greatly thickened by hemorrhage into its tissues. The ball entered through the occipital bone about an inch to the left of the median line and just above the left lateral sinus, which it opened. The bullet then penetrated the dura mater, passed through the left posterior lobe of the cerebrum, entered the left lateral ventricle, and lodged just above the anterior portion of the right corpus striatum, where it was found. The wound in the occipital bone was quite smooth, circular in shape with beveled edges, the opening through the internal table being larger than through the external table. The track of the ball was full of clotted blood and contained several little fragments of bone, with a small piece of the ball near its external orifice. The brain around the track was pultaceous and livid from capillary hemorrhage into its substance. The ventricles of the brain were full of clotted blood. A thick clot beneath the dura mater on the left side. But little blood was formed at the bases of the

(*Continued on Page 102*)

A CANCER CLINIC

AT A SMALL RURAL HOSPITAL

• A review of the service, growth and value this basically "Follow-Up clinic" offers to the Community.

O. J. Pollak, M.D.

Introduction

The usefulness of a Cancer Clinic at a hundred-bed general hospital located 150 miles from the nearest teaching center is sometimes questioned. Good medicine can be and is being practiced in rural clinics and hospitals throughout the land. A Cancer Clinic is a part of good medical practice.

The Cancer Clinic at the Beebe Hospital in Lewes, Delaware, was started in 1937 by a surgeon, Dr. James Beebe, Sr., a pioneer in Sussex County in more than one way, and by Dr. Douglas Gay, the first pathologist to practice this specialty in Delaware. In 1952, Drs. James Beebe, Jr., and O. J. Pollak took over from the original team. In 1957, a Cancer Registry was established with the support of the Delaware Division of the American Cancer Society. At that time, the surgeon and pathologist were joined by the radiologist, Dr. Leslie Dobson, by the house staff and by a secretary.

The work load of the Clinic increased throughout the years. Diagnosis of cancer is being made more often and at an earlier stage today than in the past. More patients are being treated whether by surgery, actinotherapy, chemotherapy or combined therapy. The survival rate has risen. Thus, more and more patients visit the Cancer Clinic which is basically a Follow-up Clinic.

Clinic sessions are being held the first Tuesday of each month, at 1:00 P.M. and are open to all interested physicians. With the growth of the medical community one may expect that an internist and a gynecologist will become members of the clinic staff. Additional clinic days may have to be added in the near future.

A Typical Session

The activities of the Cancer Clinic at the Beebe Hospital are best illustrated by the transcript of a typical session. June 4th of 1963 was selected for no special reason. This clinic day was neither the busiest nor the most interesting one. Compared with other sessions, more patients were seen for the first time, more patients had undergone radiation treatment but few patients after chemotherapy were seen than usually. Eleven patients were presented.

Protocol

(1) A 66-year-old white housewife with post-menopausal bleeding of two years duration. Dilatation and curretage were performed on June 1, 1961, to obtain uterine scrapings and cervical tissue for study. Adenocarcinoma of the endometrium was diagnosed by the pathologist. (SB-61-257) Radium, 80 mg., was inserted for three days. On August 21,

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Dr. Pollak is Pathologist at Kent General Hospital, Dover, Delaware.

1961, total hysterectomy was performed. No residual neoplasm was found in the uterus. (SB-63-388) Since then, the patient has been seen in the Cancer Clinic every six months.

This was her fourth visit. Her weight has remained stable. She has not become anemic and has been without signs and symptoms of disease since the operation. No evidence of disease was found on examination.

During discussion of this patient, the resident inquired about the interval between diagnosis, radiation and surgical operation. The radiologist and the pathologist explained the rationale for the combined therapeutic approach. Partial destruction of the neoplasm would not serve a purpose; complete destruction of the growth must be confirmed by histologic examination. The time lapse between radiation and operation must suffice to allow recovery of tissues from radiation necrosis. Excessive necrosis is not desirable.

(2) An 84-year-old white lady had a calcified epithelioma on the tip of her nose. It was excised on June 23, 1955. The pathologist noted that the lesion had not been completely removed and warned of possible recurrence (SB-53-510) A squamo-basal carcinoma was removed from her left ear on April 4, 1956 (SB-56-210) For three years following the first operation this lady visited the Clinic every sixth month; thereafter, once a year

At this visit, a small ulceration was seen on her nose. This could represent recurrence. The patient was asked to return in six months rather than after a year.

The intern wanted to know why the clinic staff deferred decision instead of recommending surgical removel of the lesion. He was reminded of the patient's age, of the fact that eight years had lapsed since the original growth had been removed, of the slow rate of growth in the aged, and of the mental and physical frailty of this lady whose weight has not reached 100 pounds in ten years.

(3) A 62-year-old white farmer had an epidermoid carcinoma of 1 cm. in diameter removed from the left temple. Since May 26, 1951, (SB-51-90) the date of excision of the lesion, the verdict had remained the same on his annual visits; "N. E. D."—no evidence of disease.

(4) A 71-year-old white woman. Invasive epidermoid carcinoma of the cervix was diagnosed in a cone-biopsy specimen on February 4, 1955. (SB-55-47) The patient received 5,400 mg of radium. On March 7, 1955, a month later, total hysterectomy was performed. According to the pathologist, the growth had been destroyed completely by radiation. (SB-55-113) Since then, this patient has been seen at three month intervals for two years and at six month intervals until 1960. Since then she is being checked yearly. During the first visits granulation tissue was seen in the operative field but not evidence of neoplasm tissue was found in smears for cancer cells. The past five years have been uneventful.

Combination of radiation therapy and hysterectomy, the choice treatment for invasive cervical carcinoma, apparently resulted in complete cure. The fact that this patient was 63 years old at the time of diagnosis seems noteworthy.

(5) A 65-year-old white woman had an invasive epidermoid cervical carcinoma. The lesion, on cystoscopy, was extensive, involving the urinary bladder wall. Diagnosis was confirmed on March 20, 1963, by biopsy. (SB-63-150) She was given palliative treatment to control bleeding and relieve pain. She received 30 mg of radium for 48 hours (1500 mg hrs.) and externally 2,600 r to each of four pelvic fields, between 3-26-63 and 52-2-63.

This was her first visit to the Clinic. An extensive ulceration was found on the cervix. It was decided that this patient was not suited for surgical operation and that treatment should be symptomatic.

(6) A 63-year-old white woman whose symptoms of frequency and dysuria for several months led to radiologic diagnosis of an obstructive lesion in the rectosigmoid colon and, next, to colostomy, on March 16, 1959. A medullary adenocarcinoma, Grade II, measuring 6 x 4 cm. and located on the posterior surface of a 20.5 cm. long, large portion of

the rectosigmoid, was diagnosed by the pathologist. No neoplastic cells were found in the lymph nodes. (SB-59-118) Metastasis to the lumber spine was suggested by the radiologist in September, 1959, but, in retrospect, the suspicion did not bear out. At that time, the patient presented signs of psychosis. During her regular visits to the Clinic, every six months, the patient's condition improved steadily. On the first visit her weight was 149 pounds; it gradually increased to 178 pounds.

The patient's symptoms of vertebral damage disappeared. Patients with malignant neoplasm often develop psychosis, especially with paranoid trends. In this patient, mental recovery mirrored the physical restoration to health.

(7) A 65-year-old white engineer was first seen late in July of 1960. Adenocarcinoma of the left breast was diagnosed on August 4, 1960. (SB-60-305) It involved an area measuring 5 cm. and reached to the thoracic cage. His first visit to the Clinic was in February, 1961. His second visit was scheduled for August but he failed to keep the appointment. He returned in December and on the 18th, metastatic carcinomatous nodules were removed from the postoperative scar. (SB-61-317) He received his first course of x-rays a total of 3,400 r (air). At the April, 1962 clinic session, a pea-sized node was found in the supraclavicular region and x-ray therapy was advised. He received 3,000 r (air) in April and 3,000 r (air) in July, 1961, but no change in his condition could be recorded during the October, 1962 Clinic. Next, a course of 5-florothiouracil, a total dose of 6 grams was given over a period of fourteen days. In January, 1963 subcutaneous nodes scattered over the left chest appeared flattened and the skin above the nodes was paler than before. The largest node was in the left subclavicular area. A second course of the drug was prescribed and also 10 mg. of prednisone daily.

This patient presents a problem. Radiation therapy did not prove successful. Chemotherapy affected the metastatic nodes but failed to prevent the appearance of new ones. For every metastasis which disappeared from one visit to the next a new metastasis has appeared nearby. Prednisone had no effect. In May of 1963 he had pain in the right hip and leg but x-ray studies were negative. The danger of extension, especially to the left chest, persists. Change to another chemotherapeutic agent will be considered in three months at the next visit of this patient.

The resident and intern questioned the usefulness of chemotherapy. The surgeon related satisfactory results with florothiouracil in several patients with intestinal carcinoma and cytoxan in patients with ovarian carcinoma followed in the Clinic. Strict individualization is important. The response to actinotherapy or chemotherapy depends on the morphologic pattern and the stage of the neoplasm, its location and spread, and on the host's age, resistance, physical state, etc. (In today's Clinic we had excellent, as well as poor results with various therapeutic agents.)

(8) A 79-year-old white man presented symptoms of loss of weight, pain in the lower left quadrant and black stools for three weeks. All this necessitated radiologic examination. On December 21, 1960, an adenocarcinoma of the ascending colon was removed surgically. The bowel was 23 cm long, the neoplasm measured 5 cm in diameter. (SB-60-553) Lymph nodes presented the picture of reactive hyperplasia . Since then, the patient was seen in six month intervals. He will be seen again in half-a-year.

He has been restored to health. Next to cervical and endometrial carcinoma, that of the cecum yields best results, in our experience.

(9) A 68-year-old white woman visited the Clinic for the first time. Twelve years ago a lesion on her upper lip had been treated with x-rays in another town. Recurrence of a basal cell carcinoma in December of 1962 was treated by surgical excision. (SB-62-575) She will be seen every six months.

(10) A 74-year-old white farmer had an ulcerous basal cell carcinoma on the left side of the neck. It was removed December 31, 1962. (SB-62-615)

The scar is soft, there are no palpable lymph nodes present on this, his first, visit. A lesion is present on his forehead, most likely a seborrhoic keratosis. It will be removed shortly.

The intern's question: Is it necessary to remove this lesion, 2 cm in diameter, considered clinically benign? It will leave a scar. Pathologist's answer: The clinical diagnosis is always uncertain; mistakes are frequent. It is true that seborrhoic keratosis rarely undergoes malignant change. (One instance was seen but a week ago.) The patient is anxious to have the lesion removed; he has had one skin cancer and doesn't want others.

(11) A 46-year-old white housewife paid her first visit. She had an adenocarcinoma of the ascending colon. It was removed on July 23, 1957. No lymph nodes were found at operation but multiple nodules were seen in the liver. It was assumed that these were metastatic nodes and no biopsy was obtained. (SB-57-384) The patient refused to come to the Clinic for follow-up examinations. In April, 1963, she noted a lump in the right breast. This was removed on April 10, 1963. (SB-63-181) On examination in the Clinic a lymph node was felt in her right axilla.

This case provoked an animated discussion. At the time of frozen section study of the breast tumor the pathologist was puzzled. The microscopic picture did not look like a typical mammary gland carcinoma nor did it resemble metastatic carcinoma from the colon. The breast lesion was located close to the skin, lateral to the nipple. Diagnosis of adenocarcinoma of an appocrine gland, a skin appendage tumor, was made. (Later, other pathologists concurred). Here was a situation in which the pathologist was "put on the spot." Not only was microscopic evaluation of the slide difficult but the pathologist was asked for advice as to procedure. There was a choice of closing the operative field after removal of the newgrowth, of a simple or a radical mastectomy. Simple mastectomy was chosen. (Later, the pathologist was relieved to learn that his colleagues would have advised the same.) Six lymph nodes removed during simple mastectomy proved free of neoplastic cells. Now, at the Clinic the decision had to be made about the axillary lymph nodes. The radiologist and the pathologist persuaded the surgeon to remove the node. (P.S. It was done a week later; the diagnosis was "reactive hyperplasia.")

Discussion

At the close of the clinic session comments by the participants were solicited. The surgeon (Dr. James Beebe, Jr.) commented on the cooperative spirt. Decision as to biopsy or removal of a new lesion, as to surgical or radiologic treatment of a recurrent or metastatic growth is made jointly by the clinic staff. The radiologist (Dr. Leslie Dobson) stressed the advantage of seeing patients months or years after radiation treatment had been terminated. This helps to evaluate the type and dosage of x-ray or radium for a particular type of neoplasm. The pathologist (Dr. O. J. Pollak) stressed the opportunity of contact with live patients. Correlation of the texture of live skin with the histologic pattern seen some time ago under the microscope is intriguing. And there is delight to urge various diagnostic procedures as basis for therapy and to play the whole scale of opportunity to act as consultant. The Intern (Dr. Marc Hurm) and the Resident (Dr. Joseph Tolentino) appreciated meeting a selected patient population. For them, it is important to see the results of various diagnostic and therapeutic approaches to oncology, to participate in the analysis of cases and to learn "how to talk to a cancer patient."

How about the patients? They have confidence in the physician of their choice. They share with him his confidence in a group of consultants. They are aware that three pairs of eyes see more than one and they like to be examined by three or more physicians. They value the continued and very personal interest of a group of specialists. They answer enthusiastically the secretary's inquiry about their grandchildren. They like to come to this free Clinic. Some patients are reassured when told to prolong the intervals between visits. Other patients, especially the elderly, want to come more frequently, for a check-up, a handshake and a smile.

President's Page

UNDERGRADUATE NURSE TRAINING AT UNIVERSITY OF DELAWARE

Many physicians are aware that the University of Delaware is presently offering an undergraduate program in Nursing leading to the degree of Bachelor of Science in Nursing. Mrs. Madeline McDowell, Chairman, Department of Nursing, has furnished information which will be helpful to all of us. It is as follows:

"The program is developed for intellectually able young women and men who have a capacity for and an interest in becoming liberally educated professionals.

Graduates of the program have a sound theoretical and scientific preparation which equips them for first level Public Health Nursing positions, team leaders or assistant head nurses in hospitals and provides a base for the master level to prepare for teaching, administration, research or a clinical nursing specialist in a particular nursing field.

The University of Delaware has been able to attract faculty who are prepared on the master level in the area in which they are teaching, i.e., Medical-Surgical, Maternal and Child Health and Psychiatric Nursing. Several faculty members have post-master preparation, and are well on to the doctoral degree. There is a diversity of universities represented in the currently employed faculty —Western Reserve, University of Orgon, University of Pennsylvania, University of Maryland, St. Louis University, Boston University, Catholic University and Yale University.

The number of applicants for the program has been gratifying and demonstrates the need for such a program in Delaware. Sixty-three (63) students have been accepted for September, 1964, thirty-one (31) are Delawareans. According to national attrition rates, forty (40) nurses will graduate in 1968 with the Bachelor of Science degree in Nursing. The first class of nine (9) students complete the requirements in September, 1965, sixteen (16) students in 1966, twenty-three (23) students in 1967.

There have been many misconceptions concerning the graduates of a baccalaureate program, particularly the notion that such a graduate does not give direct patient care. This is an erroneous idea, since all of the learning experiences are conducted on a case study or patient-centered method and clinical experience is almost entirely that of giving patient care under faculty guidance. Moreover, technological advances are making it possible for IBM machines to take over much of the 'paper work' in hospitals. This frees the nurse for patient contact and indicates that the need for nurses will become a qualitative shortage rather than a quantitative one.

Nursing today takes the nurse out of the hospital and into the community. Indications point to a coordinated system of health care with an interprofessional effort of which nursing is only one service.

In order to provide an education that will serve the nurse beyond her student days, it seems self-evident that this requires a liberally educated individual, guided by experts in the field, in a climate that is conducive to producing a practitioner who will give competent and compassionate care to patients. It is to this premise that the faculty in nursing at University of Delaware is committed."

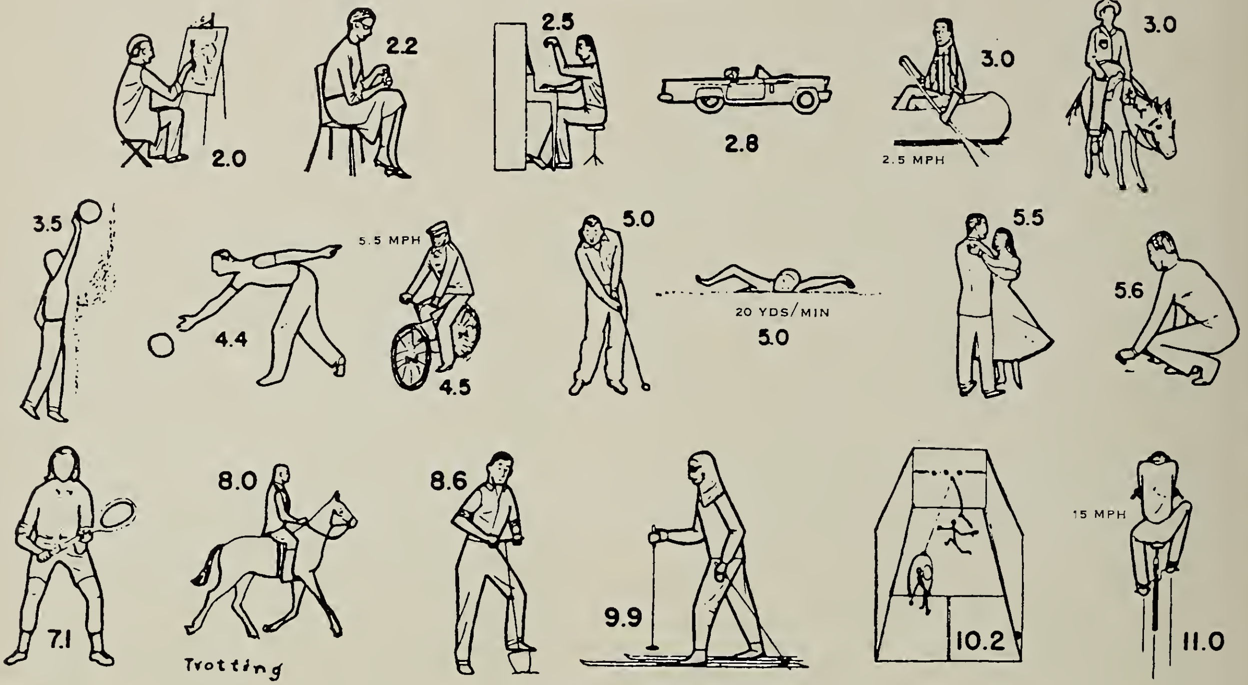
All physicians are urged to become better acquainted with this outstanding educational program for undergraduate nurses.

Floyd I. Hudson

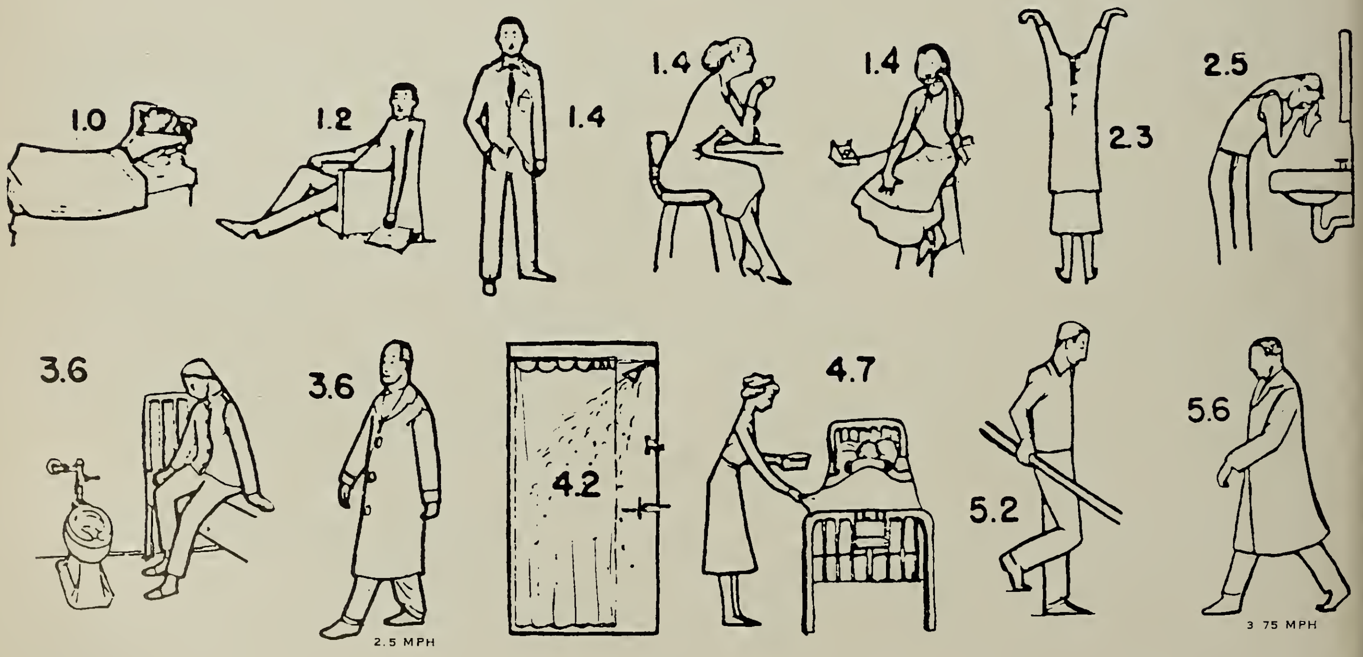
THE USE OF ENERGY COSTS IN REGULATIVE PHYSICAL ACTIVITY IN CHRONIC DISEASE

These illustrations indicate energy costs in calories per minute. When so expressed, the basal expenditure is about one. Working cost includes basal expenditure. Thus the numbers on the illustrations can be taken to be as roughly equivalent to the number of times basal level the particular task requires. Actual equivalence is 1.0 basal = 1.39 calories per minute.

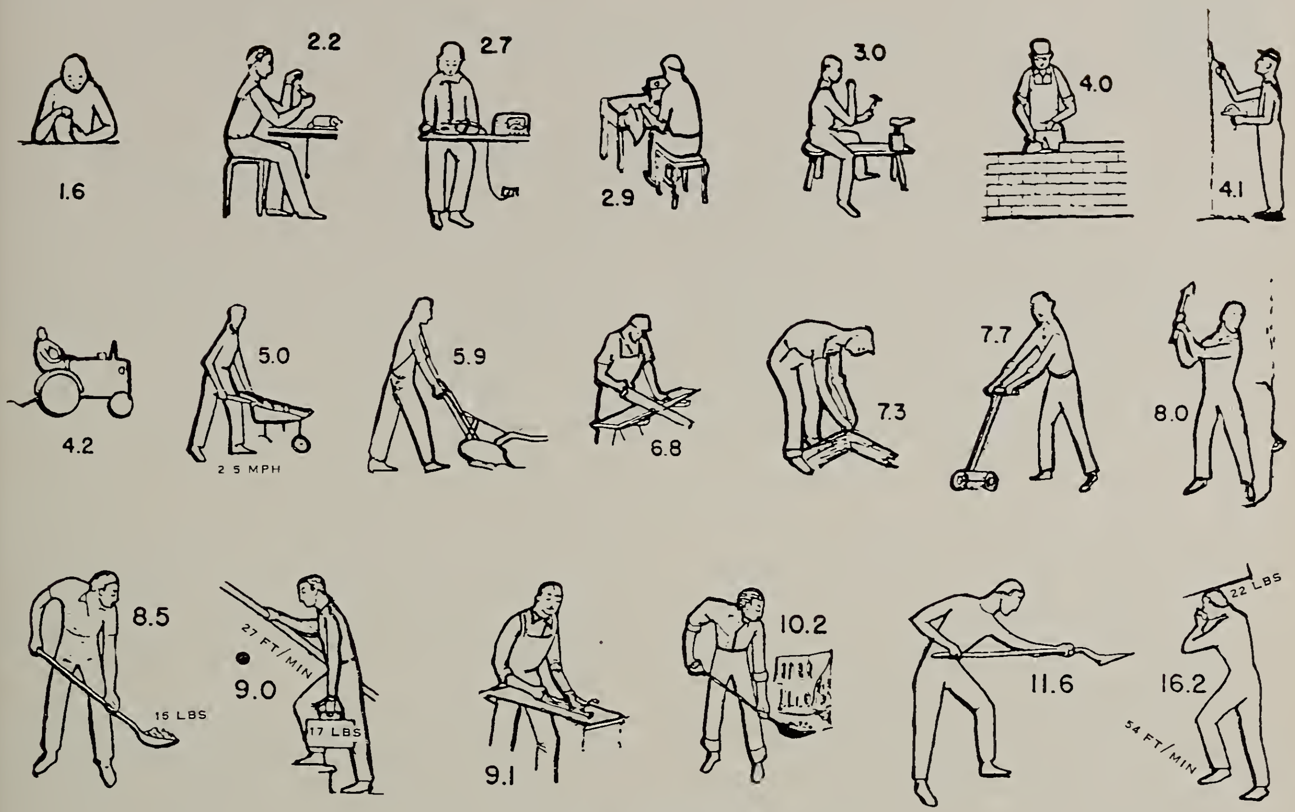
RECREATION



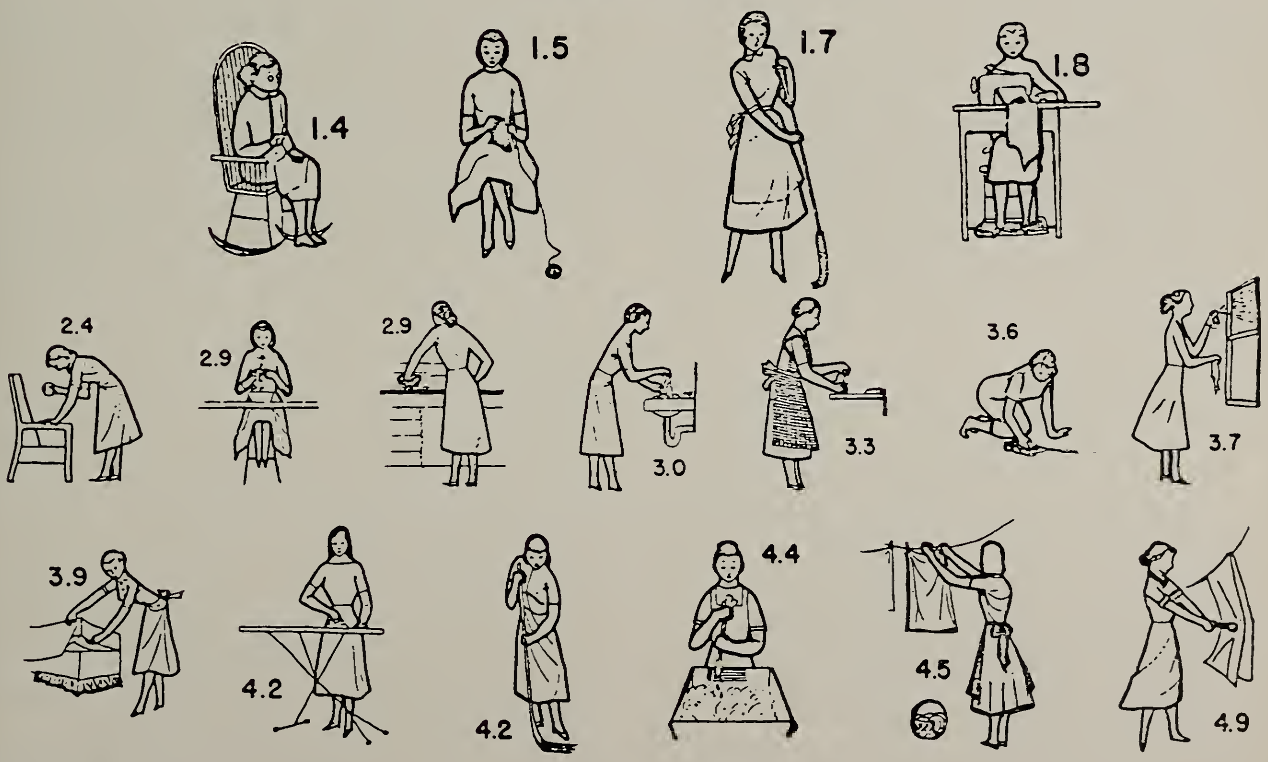
SELF CARE



OCCUPATION



HOUSEWORK



Reproduced by permission of the author from an article by Edward E. Gordon, M.D.: "The Use of Energy Costs in Regulating Physical Activity in Chronic Disease." A.M.A. Archives of Industrial Health, November, 1957.

Delaware Academy of General Practice

DELEGATES' REPORT—ANNUAL MEETING, AMERICAN ACADEMY OF GENERAL PRACTICE

Atlantic City, April 11-13, 1964

Your two delegates, Drs. Douglas MacKelcan and Henri F. Wendel, were in attendance at all five sessions of the House of Delegates and also attended several reference committee hearings and voiced their opinions on the matters being discussed.

The following items were voted upon:

1. Four years ago the educational requirements for admission to the Academy were increased to include two years of hospital training for Academy membership after 1965. A proposal to retreat from this position was defeated at this meeting. It was felt that increased effort must be expended to increase the number of approved training programs rather than fall back and say "we can't do it."
2. The "Fellow" membership classification was also rejected. It was felt that a piece of paper in a physician's office proclaiming him to be a "Fellow of the AAGP" was not the added stature that was needed in the Academy of General practice to proclaim professional proficiency.
3. The Congress commended the Joint Commission on Accreditation of Hospitals of the AMA for its statement in a March, 1964 bulletin which recommended that GP's should have the opportunity to practice medicine as active staff members in hospitals and should have privileges granted to them as their training and demonstrated ability indicates. This is a reversal of the JCAH policy of previous years.
4. A reference committee proposal to change the name of the Academy to "The American Academy of Family Physicians" was rejected in favor of a minority report which deplored usage of the term "FPs."
5. The state chapters with medical schools in their vicinity were urged to seek establishment of one or more of the following in those schools: a. Preceptorships; b. Lectures and seminars; c. Family care clinic; d. Comprehensive care supervision by GPs in out-patient departments.
6. The Congress failed to take any action officially on tobacco warning labels on all packages of cigarettes. It was felt that there should be further investigation of the evidence first.
7. The Congress approved the establishment of a special fund to be used by the Board of Directors to support test court cases dealing with hospital privileges for general practitioners.

Again I regret to report that our campaign to seat Dr. Marjorie Conrad on the national board of directors was unsuccessful. This was not in any way due to a lack of work and cooperation by the members of the DAGP. Besides your two delegates and Dr. William Shellenberger, who toiled long into the wee hours of the morning, much, much, very appreciated help—both politicking and hostessing—was supplied by Drs. Tarrant, Pennington, Davolos, Thomas, Bartoshesky, Hewitt Smith—and their wives—and Larry Morris, our Executive Secretary. We all know that although Marjorie is better equipped for the position the National Headquarter's loss is still our gain.

Respectfully submitted

Henri F. Wendel, M.D.
Douglas W. MacKelcan, M.D.

Editorials

Wilmington School of Nursing, Inc.

During the past few weeks, the formation and progress of the Wilmington School of Nursing, Inc., has been a subject of much discussion among members of the medical profession. Charges and counter-charges have been made, some being valid and others being completely unreliable as any statement made during the heat of discussion is likely to be. The medical profession has been told that the training of nurses is none of their business. Members of the profession have counter-charged that the proposed setup is entirely inadequate.

The degree of close cooperation necessary between the medical and nursing profession is obvious.

Regardless of our personal feelings in this matter, the fact remains that the Wilmington School of Nursing, Inc., is an accomplished fact and that for a period of years begining in 1967, the proper care of our patients, for whom we are responsible, will depend to a large extent upon the graduates of this school.

Consideration of the above leads to only one conclusion: The medical profession in Wilmington should do everything in its power to back up this school and make it a success. Our patients have depended upon us in the past; they can do so in the future.

A REGISTERED NURSE THANKS ROTARY

The following remarks were presented by Miss Julia Jones, R.N., to the Wilmington Rotary Club on May 7, 1964. There probably are numerous reasons to justify publication of these remarks. Two obvious reasons are to show the high type young lady presently graduating from our nursing schools and to show the amount of good done by service organizations such as Rotary. — Ed.

Gentlemen of the Rotary Club:

I was honored when Mr. Rhoads asked me to speak to you today. The thought, though, of appearing before the members of the Rotary Club somewhat frightened me, but I wanted the opportunity to be able to thank you in person for all you did for me.

Four years ago you awarded me a grant-in-aid so that I could obtain a nursing education at St. Francis Hospital School of Nursing. This had been my dream, my inspiration, for many years, and I had been saving towards this by baby-sitting and working as a waitress in the five and dime while going to St. Elizabeth High School. Then came your grant and your generosity covered my three years tuition fee.

But you gave me even more than this financial assistance. In your letter of notification it was written what you expected of me and the virtues you hoped I'd try to acquire. A copy of this letter I kept on my study desk throughout my student years. I referred to it often. And it was this—your expectations of me—that helped me through many low spots. Two paragraphs of that letter, in particular, I became familiar with. They buoyed me up and pushed me on many times. I'd like you to know just how they read:

> "The Rotary Club confidently expects that you will strive to achieve better than average scholastic and practical standards throughout the three years of your training and that you will feel an obligation to do so.
>
> "You are also expected to cultivate carefully and constantly those personal qualities which will enable you to render the best possible service throughout your nursing career, such as: Integrity, health, accuracy, judgment, sympathy, good humor, and a genuine liking for people."

Whenever I was tired from a day's floor duty and classes and I was reluctant to study, I'd re-read that sentence: " . . . achieve better than average scholastic and practical standards." Then I'd stay with the books a bit longer and usually work with renewed vigor. As a result of your implicit faith in me I usually received fairly good grades in classwork and practice ratings. I wanted to fulfill your expectations of me as best I could and make sure the Rotary Club would not regret having helped me.

I graduated August of last year and am now a registered nurse. I've been working in the Intensive Care Unit of the Wilmington General Hospital and will work this summer at the Beach Camp for Handicapped Children in Lewes, Del. I love nursing. I hope to go on to get a B.S. degree and eventually to work with emotionally disturbed children. These doors are all open to me thanks, in part, to you.

I hope that the members of the Rotary Club realize the amount of good they have done and are doing for people.

Resistance To Viruses

A radically new technique for protecting living animals against viruses introduced a method which stimulates a body substance called interferon. This new approach was described by virologists of the Pfizer Company at the meeting of the Federation of American Societies for Experimental Biology. Interferon is a protein substance apparently made by living cells in response to virus invasion. It is not the same as an antibody but if present in sufficient quantity may give immediate protection against virus attack. This line of research was based on the premise that the infectious part of a virus is its nucleic acid, either DNA or RNA, which composes its reproductive mechanism. The investigation may open the way for new approaches to the prevention of virus diseases.

Promotion

Eleanor J. Bader has been appointed Director of Care and Treatment Service of the National Society for Crippled Children and Adults. Prior to joining the National Society in 1962, Miss Bader was for 11 years Executive Director of the Delaware Curative Workshop. Miss Bader will direct all rehabilitation programs serving crippled children and handicapped adults of Easter Seal affiliates in 52 states and territories.

Hospital Equipment Goes To Saigon

Shipped to a pier in New York City were several cases of orthopedic equipment marked for over-seas shipment to MEDICO for a program presently operating in Saigon. This donation came from the Delaware Hospital, Wilmington, and was sent at the suggestion of Walter Bailey, M.D., Chief of Orthopedic Surgery at the Hospital. The shipment consisted of six complete overbed fracture frames for adult beds that could be used to place a patient in traction for almost any type of orthopedic ailment. Sent along with this were several sets of pulleys to be used in conjunction with the frames and auxiliary orthopedic traction items. It was estimated that it would cost the hospital $750 to replace this equipment at today's prices.

International Medicine

A new brochure available through the World Medical Association advocates greater participation in private international health programs by American physicians to insure that the American system of medicine and U.S. World medical leadership does not perish under government encroachment and control. *Your Leadership Role in Free World Medicine* represents the viewpoint of private medicine on the international level. Doctors may obtain their copies on request: World Medical Association, United States Committee, Inc., 10 Columbus Circle, New York

In Brief

Safety Honors

The Veterans Administration Hospital of Wilmington was one of the eight first-place award winners of the 1963 Hospital Safety Contest, sponsored by the American Hospital Association and the National Safety Council. The Grand Award winner was the U. S. Army Tripler General Hospital, in Honolulu. The eight hospitals were of varying size, and reported the largest number of injury-free man-hours for their size categories. A total of 375 hospitals participated in the contest.

Member Honored

Davis G. Durham, M.D., has been elected to membership in the Explorers Club which gives him the distinction of being the only physician in Delaware who has ever been elected to this organization. At the present time there is only one other member from Delaware in this society. Dr. Durham's qualifications for membership were based on original work done in 1949, on "Phlyctenular keratitis" on the Eskimos of Alaska. Also, on determining the cause of "Samoan conjunctivitis" in American Samoa in 1957, the cause of which was determined to be trachoma.

AMA Convention Subject

The workings of the endocrine glands, which control the growth, development and bodily functions of man, will be the subject of a half-day general scientific meeting at the AMA's Annual Convention in San Francisco. Because of universal interest in this subject, "Standing room only" has been predicted in the lecture hall. The title of the program is *Hyperfunction of the Endocrine Glands and Functioning Endocrine Tumors.*

On Cancer

- In sending Congress an encouraging report on its battle against leukemia, the National Cancer Institute has asked for funds for "an all-out effort towards the goal of a cure." Institute Director Kenneth M. Endicott said there had been a great increase in the number of children in which it was possible to arrest the disease—at least temporarily. He said laboratories had found cancer-causing agents when fats were heated to hot temperatures and incompletely burned. Sub-Committte members asked Endicott about possible cancer-causing elements in such food as charcoal broiled steaks and potatoes cooked in ashes. Dr. Endicott said they were not prepared to draw final conclusions to date. He said improved treatments had increased the temporary remission rate for children with acute leukemia to about 90% and had dramatically increased the periods of their remissions and consequently their life expectancy. *The Month In Washington.* (AMA)

- Further experimental evidence reported by Chicago's Cook County Hospital indicates the possibility of an effective vaccine against leukemia. In animal studies results were obtained suggesting that leukemia virus induces an immunologic response of the type produced by other viral agents. It may find a parallel in man and suggests the possibilities of a preventive approach. *Medical World News*, Feb., 1964. Courtesy of *Schering Science Bulletin.*

Auxiliary Affairs

ANNUAL REPORT OF THE PRESIDENT OF THE KENT COUNTY MEDICAL SOCIETY

Now that most of our year's activities are behind us, we look back upon them with a feeling of accomplishment. We have 27 members, one-half to two-thirds of them being active. Last fall Kent County was again "Hostess" for the Coffee Hour at the State Convention, held in Wilmington. Three of our members participated in this interesting meeting.

The Oral Sabin Vaccine Program, sponsored by the State Medical Society, was quite a challenge to us. It was impossible with our small membership to secure two doctor's wives for each clinic, so we asked the aid of the Future Nurses Clubs. In many instances the young Future Nurse was a tremendous help, as in January when bad weather prevented at least one member from reaching her post. Fourteen members participated in the Polio Clinics, two worked twice, and a non-medical friend aided our efforts twice.

During the Christmas season the Auxiliary gave a $50 check to the parents of the Dover Day Care Center (an increase of $25 over the past two years). These parents, whose children attend a State supported school are an active and interested group. At our May meeting a representative of the group will tell us about the school, illustrating her talk with slides.

At our mid-winter meeting, we enjoyed the company of the other county presidents and the state president. It was well atended, the discussions lively and varied. Support of the Golden Opportunity Center in Dover was urged. The group decided to ask for a speaker from the Center at the first fall meeting; as the Dover Day Care Center was our first interest.

A recent survey of our work with the Future Nurse Clubs disclosed 241 members in the seven clubs. Each spring we give a tea for the girls, this year limiting it to juniors and seniors and the Hi-School nurse advisor. Without the aid and inspiration of these wonderful nurses our work with the clubs wouldn't be possible. Mrs. Robert Wright, R.N., an Auxiliary member presented a delightful program on the "History of the Nurse's Cap." Over a period of six months Mrs. Wright had collected many different caps, including those from the three oldest schools in this country. During the tea she pinned most of them on the delighted girls. We were honored with a visit of a former Dover Hi club member, now a first year student at the Milford Memorial Hospital School of Nursing. A 25 year old uniform from the Massachusetts General Hospital training school was also modeled. In seeing the two young ladies in student uniforms, it was remarkable how little the garb had changed in a quarter of a century. As one of our guest speakers, Dr. Lawrence Baker noted, "*the dedication of the nurse is always the same.*" Scholarship blanks are now coming in, and the applicants will be screened by some of our members (preferably R.N.'s). A movement is "afoot" to have the Kent General Hospital group taught by a Red Cross volunteer nurse.

We have fourteen subscriptions to the Bulletin; and interest in legislation seems keen. The proposed letters for the Hi-school health classes were enthusiastically received.

The nominating committee has already "recruited" the new officers to the delight of the president who will be able to bring the incoming president to the Spring Workshop. With this year's work coming to an end, we find that it has been rewarding in fellowship; in growing knowledge of the purpose of the Auxiliary, and inspiration to do more in the coming season. Kent County is growing, we have many new doctors and the challenge to acquire their wives as new members next fall.

Mrs. Maynard H. Mires, *President*

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SACROCOCCYGEAL TERATOMA

• The following article describes a congenital malformation which, although rare, is of interest to the obstetrician, to the pediatrician and to the surgeon. A case of sacrococcygeal teratoma in a male newborn is presented. To the authors' knowledge this is the first case reported in the State of Delaware.

Albert Gelb, M.D.
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V. G. Jaurigue, M.D.
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P. Francisco, M.D.

Sacrococcygeal teratoma is a rare condition, found most commonly at birth, infancy, or early childhood, and occasionally discovered in adults. Roughly it occurs once in every 40,000 live births,[1] and is the commonest type of teratoma in infancy. One hunderd three cases were reported in the English literature from 1938 to 1953[6] and 111 cases reported since 1953.[12] Sacrococcygeal teratomas are predominantly found in females with an overall incidence of 81%.[1,6]

Sacrococcygeal teratomas are considered malformations because they are anatomic developmental errors which first appear in the embryo and increase in size with the growth of the fetus. However, they are also true neoplasms because they grow independently and also have a definite propensity to undergo malignant change. It is because of this latter characteristic that its surgical significance is stressed and early extirpation advised.

Etiology

Several theories have been raised as to the etiological factors involved in the development of sacrococcygeal teratoma. It seems that the most acceptable one is that of Gross[3] which postulates the origin of the tumor from primordial cells. These cells may be pluripotent (producing at least two germ layers) or totipotent (producing cells representing all three germ layers). Gross feels that if careful microscopic studies are made, all the three germ layers will be found.

This thesis is substantiated in his forty reported cases from 1920 to 1950. The primordial cells concentrate in the primitive knot, the nidus from which the fetus develops. The primitive knot, during the embryonic development, is finally localized in the coccyx and its totipotent cells are apt to split off and give rise to neoplasms.

The genital cells which arise from the primitive knot migrate anteriorly and become concentrated in the developing urogeni-

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Dr. Jaurigue is Senior Surgical Resident in Surgery; Drs. Liboro and Francisco are Residents in Pediatrics; Dr. Albert Gelb is Surgical Chief; Dr. Rosenblum is Director, Department of Pediatrics, at the Wilmington General Hospital, Wilmington, Delaware.

tal ridge. The caudal portion persists, becomes thickened, and forms an undifferentiated reproductive gland at 27-35 days of age. In the male embryo, the reproductive gland anlage differentiates abruptly at 31-34 days of age while the reproductive gland anlage in the female embryo differentiates at 39-50 days of age. The relatively longer time of differentiation in the female reproductive anlage may explain the higher incidence of sacrococcygeal teratoma in female. In the 40 cases reported by Gross and associates, 32 were females and 8 were males.

Many investigators believe that teratomas are the result of twinning or of a suppressed fetus.[12] From the overall report of 103 cases from 1938 to 1953, 14% showed strong familial history of twinning.[6] Waldhausen and associates[12] reported 13% with history of twinning in 23 cases. Gross[3] reported more than 50% incidence of twinning in blood relatives.

Pathology

Grossly, sacrococcygeal teratoma may vary in size from a few millimeters to a size larger than the baby's head. It may be cystic or solid or mixed. Microscopically, they are composite masses possessing more than one germinal layer. Most often, tissue representing all three germinal layers will be seen. Sacrococcygeal teratomas may be benign or malignant. Waldhausen[12] reported a 42% incidence of malignancy in children. In the series of 25 cases reported by Martinez and Angulo[8] two were malignant. Eleven out of forty cases in Gross's[3] series exhibited histologically malignant characteristics, an incidence of 27.5%. On reviewing the reports in English language, Hickey and Layton[6] pointed out that there is a definite propensity for sacrococcygeal teratoma to undergo malignant change, usually after four months of life, but apparently infrequently after five years of age. When these tumors become malignant, they may invade locally or have bloodborne or lymphatic metastasis. In general, the largely cystic masses are apt to be benign.

Large sacrococcygeal teratomas have a tendency to dissect anterosuperiorly into the hollow of the sacrum, thereby displacing and distorting the rectum and vagina without actually invading them. Extension of the tumor may reach to the retroperitoneal space. There have been reported cases of associated obstructive uropathy. Occasionally the tumor may enter the spinal canal and grow upward extradurally. Attachment to the coccyx is almost always seen.

Diagnosis

Large tumors are obvious at the time of delivery but small masses may not be discovered until later in life. Sacrococcygeal teratoma should be differentiated from the following conditions. meningocele or myelomeningocele, chordoma, ependymoma, pilonidal cyst and sinuses, neurofibroma, cystic hemangioma, and abscess formation. In meningocele, there is increased tension of the mass on crying and bulging of the fontanelles on pressure over the mass. Furthermore, in myelomeningocele, there are usually neurological defects in the legs and x-ray evidence of sacral deformity. If the tumor is purely cystic by palpation, it is clinically difficult sometimes to differentiate the two conditions.

Chordomas are rare in early life. They usually occur in the fourth decade and more frequently in males. Sacral bone destruction is a common finding.

Ependymomas appear in the filum terminale and present themselves in the presacral area. They erode adjacent bone by pressure necrosis.

Pilonidal cysts and sinuses are more common in adult males and presacral extensions do not occur. Occasionally, however, a small sacrococcygeal teratoma in adult may become infected and exude purulent material and may be mistaken for an infected pilonidal cyst or sinus or a simple abscess formation.

X-ray studies have helped in the diagnosis and in determining associated conditions. A plane film of the tumor mass, to show calcifications, to include the sacrum and coccyx, to show the presence or absence of bone destruction, should be taken. A chest x-ray should be taken, especially if malignancy is

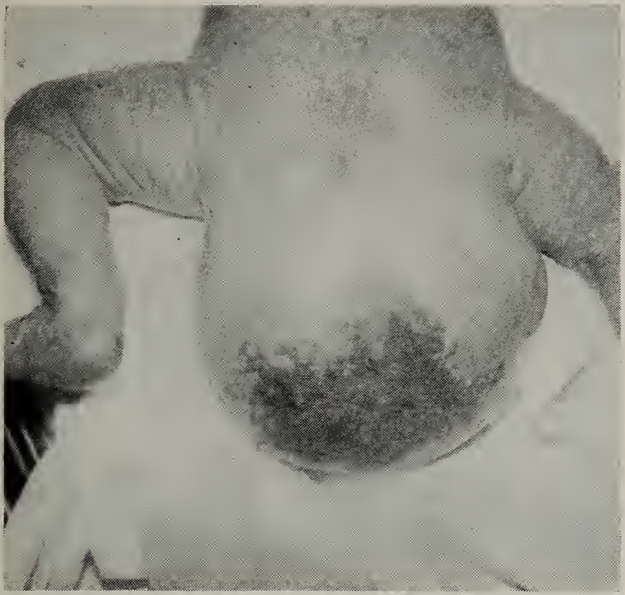

Fig. 1. Patient lying in prone position

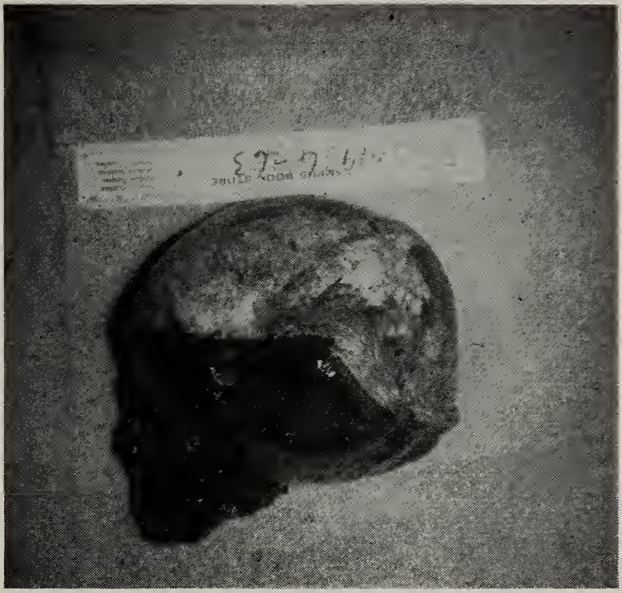

Fig. 2. Intact Teratoma surgically removed

suspected. I.V.P. will detect any associated obstructive uropathy in tumors with large presacral or retroperitoneal extensions. Barium enema has not been of much help although it will show the presence and degree of rectal displacement.[3]

Treatment

Early complete surgical extirpation is urged unless contraindications such as metastatic disease or wide spread local invasion is present. Prematurity is not a contraindication.[3] Before discussing the technical details in the surgical removal of sacrococcygeal teratoma, a few facts and figures should be cited.

The definite tendency of sacrococcygeal teratoma to undergo malignant degeneration cannot be overemphasized. The general principles that are observed in cancer surgery should likewise be observed in handling this particular condition. From studies by Izant, Benson and associates reported an 18% incidence of malignancy in resected specimens if operation is performed under one month of age, however, if the surgery is delayed past one month of age, 40% of resected specimens contain malignant tissue. From the same study, the overall mortality was 33% with an operative mortality 22%.

Blood loss during operation is almost always greater than estimated.[6] This calls for meticulous hemostasis and the ready availability of blood if needed. Most of the reported deaths after attempted surgical extirpation have been due to hemorrhage. It should also be emphasized that the coccyx should be excised together with the tumor. Gross reported a 37% local or incisional recurrence rate when the coccyx was not removed.

Technic

The first successful removal of a sacrococcygeal teratoma was performed by Blizzard in 1841. The most popular current technique was described by Gross and associates[3] in 1951. A venous cutdown for administration of fluids and colloids is placed in the arm before sending the patient to the operating room or prior to the induction of anesthesia. General endotracheal anesthesia is preferred. On the operating table, the patient is placed in prone position with the hips elevated. Prior to the preparation of the operative field and draping, a strip of vaseline gauze is inserted into the rectum to faciliate easy recognition and dissection of the rectum from the tumor. An inverted V-shaped incision is made over the buttocks with the apex at the sacrococcygeal junction. A line of cleavage is reached after cutting thru very thin

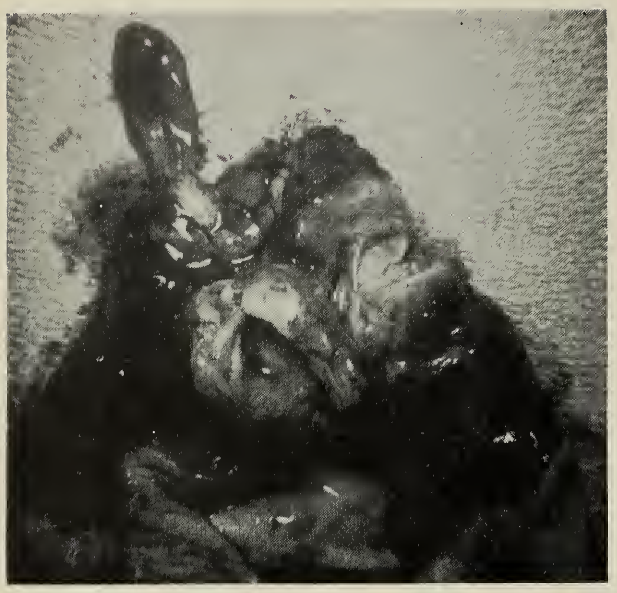

Fig. 3. Open surgical specimen. Pedunculated tissue at the upper left margin; histologically represented lung tissue.

fascial layers and skin flaps are developed. Dissection is carried on to the fibro vascular pedicle and the fourth and fifth sacral segment is transected. Meticulous hemostasis is observed. The tumor is dissected from the rectum and removed en bloc together with the adjoining coccyx. The levator muscles are sutured to the prescral fascia which places the anus and rectum in their natural position. Postoperatively the patient is placed in a Bradford frame well-padded with foam rubber, face down, for at least one week, to prevent urinary and fecal contamination of the skin incision.

Smith, Passaro and Clatworthy, Jr.,[10] realizing a few disadvantages of this technique, offered a modification. By arteriographic studies they demonstrated that the middle sacral artery, which in these patients is comparable in size to the external iliac artery, is the sole blood supply of the teratoma, and the venous drainage is through the middle sacral vein. These vessels are located immediately ventral to the distal sacral segment. They suggested beginning the dissection at the apex of the incision down to the distal sacral segment and coccyx, transecting the fourth or fifth sacral segment, isolating the vessels and ligating and dividing them early. This gives three advantages: it provides prompt hemostasis, thereby avoiding unnecessary blood loss; it prevents tumor spread from manipulation of the tumor during the operation; and it allows early adequate exposure of the rectum. We found this modification in technique ideal in our case.

Tumors with large pelvic or retroperitoneal extension should be done through a combined abdomino-sacral approach.

Case Report

A 7 pound 5 ounce white male was born to a 26-year old gravida V mother spontaneously in vertex presentation at the Wilmington General Hospital on November 24, 1963. An ovoid, largely cystic mass, slightly bigger than the infant's head was readily noted at the sacrococcygeal region (Fig. 1). The mass was completely covered with skin and solid portions were noted on the left side. There was no increased tension on the mass when the baby cried nor was there bulging of the fontanelles when pressure was applied on the mass. No other abnormality was noted. A flat plate of the abdomen, which included the mass, showed an oseous fragment in one portion of the tumor. No destruction of the adjacent bone was seen. I.V.P. was normal. Barium enema was normal except for some displacement of the rectum anteriorly by the tumor.

On the fifth day, excision of the tumor was performed under general anestesia. The technique of Gross with modification by Clatworthy, Jr., was employed. The presacral component of the tumor reached up to the level of the second sacral segment. No technical difficulty was encountered. Blood loss was estimated to be 50-60 c.c. and no blood transfusion was required. The preoperative diagnosis of sacrococcygeal teratoma was confirmed microscopically. The tumor contained elements of ectoderm, mesoderm, and endoderm. Skin with sebaceous glands and sweat glands, adipose tissue, striated muscle, smooth muscle, nerve fibers, brain tissue, lung tissue, mucosa and wall of gastrointestinal tract and cardiac muscle were seen (Fig. 2, 3). There was no evidence of malignancy.

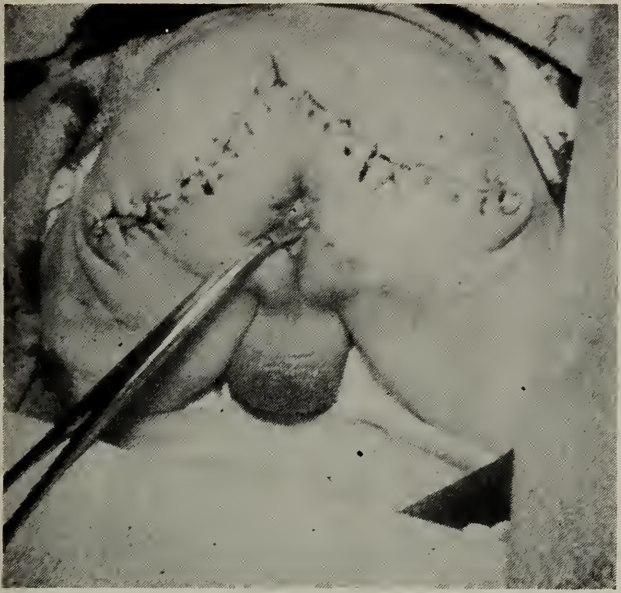

Fig. 4. Inverted incision at the completion of the operative procedure. The tip of the hemostat is clamped to the vaseline gauze packed in the rectum prior to the operative procedure. Also note the prone frog-like position of the patient

The patient did well post-operatively. The skin incision healed per primum (Fig. 4). He was discharged on the eleventh postoperative day in good condition.

Summary

Sacrococcygeal teratoma, although a rare congenital lesion is the commonest type of teratoma found in inafncy. It is of surgical significance because of its propensity to undergo malignant change. It is more predominant in females. Early complete surgical extirpation is urged. Prematurity is not a contraindication. Most of the reported deaths following surgical removal have been due to hemorrhage.. Blood loss during the operation is greater than estimated. Meticulous hemostasis is emphasized. The surgical technique of Gross with modifications by Clatworthy, Jr., et al is described. A case of benign sacrococcygeal teratoma in a male newborn succuessfully excised is presented.

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EDITORIALS

(*Continued from Page 137*)

not only of interest but of practical importance that two of these four patients had attacks of syncope totally unrelated to the basic heart block. One patient was found to have a tumor of the right atrium while the other had attacks of syncope due to hyperventilation. Both of these patients were saved an operation which not only was not indicated but could possibly have had undesirable effects.

This article shows us that more than casual observation should precede surgical implantation of an electronic pacemaker.

CHEESE HYPERTENSION

Both the medical literature and the information sent to physicians by pharmaceutical concerns has warned against the possibility of severe paradoxical hypertension occurring in patients who are taking certain antihypertensive agents, apparently precipitated by the ingestion of ripened cheese. These bouts of hypertension not only mimic the type seen in a patient with pheochromocytoma but may even be related as far as the causative mechanism is concerned. Any physician treating a patient for arterial hypertension should be aware of this possibility and, in addition to warning the patient regarding certain dietary restrictions, should proceed cautiously with medication.

THYROID CANCER DEVELOPING AFTER IRRADIATION OF THE ADULT

• The author presents a case of thyroid cancer developing after irradiation of an adult. Most reports of late radiation thyroid cancer deal with those treated during infancy when the gland is thought to be more susceptible. However, a causal relationship cannot be established since second cancers are not unusual in patients who have malignant lymphoma.

JOHN F. HYNES, M.D.

There have been numerous reports of thyroid cancer in children attributed to irradiation in infancy (of thymus or of pharyngeal lymphoid tissue). Winship in 1956 collected 334 cases of thyroid cancer in children, about 20% of whom had had thymic irradiation in infancy. From a cancer registry of approximately 10,000 cases I could find only one such case. The recent publication of a report by Morris and Hardin (*Archives of Internal Medicine, 113,* 147, 1964), of thyroid cancer in an adult following external irradiation at age eight stimulated this report. They were able to find in the literature only 12 previous cases (except for the Atomic Bomb Control Commission's report of increased incidence of thyroid cancer among exposed Japanese), and added one case of their own. Their patient was irradiated at age eight, had thyroid mass at age 21, had a thyroidectomy at age 28, and was well 17 months later.

Case Report

A boy (white), 15 years of age was first seen on October 14, 1948, after biopsy of a cervical lymph node revealed Hodgkin's disease. On examination he presented bilateral servical adenopathy, and chest x-ray examination revealed a massive lobulated tumor extending into both hilar regions. He was tall, muscular, had axillary and pubic hair, and well developed genitalia.

He was given x-ray therapy by the segmental radiation technique.[1] Each side of the neck was given 1000r (in air) from 10-14-48 to 11-5-48, and an additional 600rA from 12-27-48 to 1-6-49. Each lobe of the thyroid

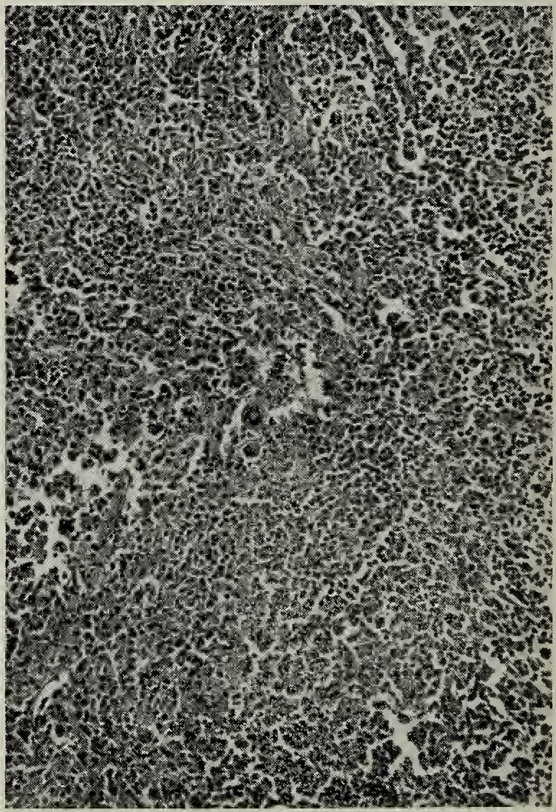

Fig. 1. Photomicrograph of cervical lymph node, MH 1842-48, Hodgkin's disease.

Dr. Hynes is Chief of Neoplastic Disease, St. Francis Hospital; Consultant and former Director of the Carpenter Clinic, Memorial Hospital, Wilmington.

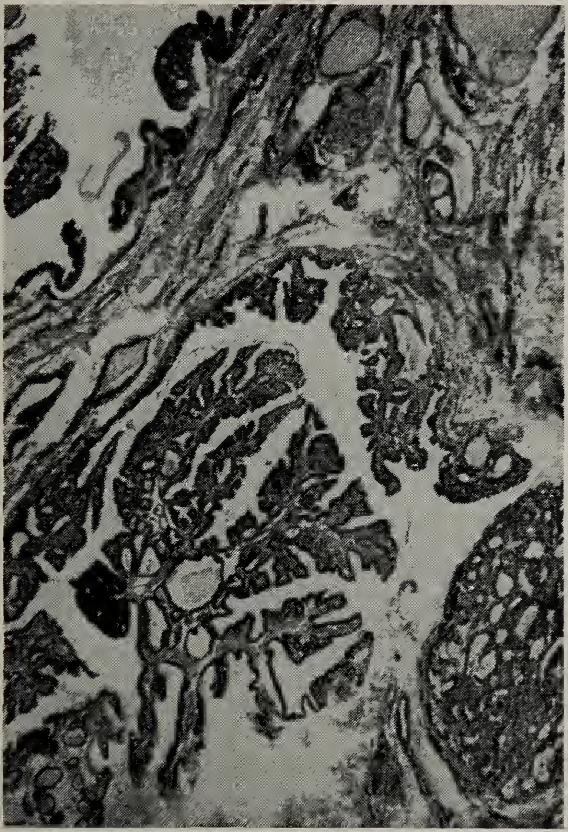

Fig. 2. Photomicrograph of thyroid, SFH 1539-58, papillary adenocarcinoma of thyroid.

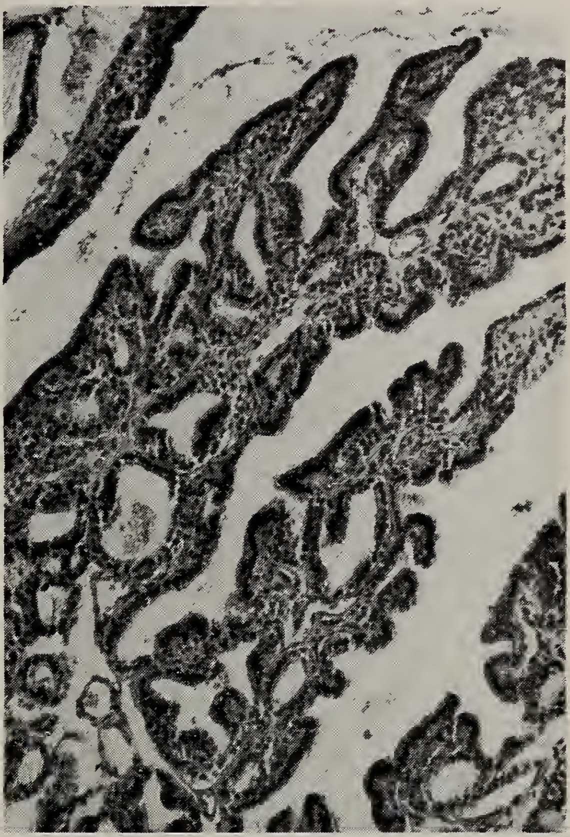

Fig. 3. Papillary carcinoma of thyroid (higher power).

probably received about 1500r. He has had no recurrence of Hodgkin's disease after 15 years.

In October, 1958, the patient returned with a four week history of swelling in the left neck. Examination showed a 2.5 cm firm mass in the upper pole of the left thyroid lobe and a second smaller nodule in the right lower lobe. There were no signs of thyrotoxicosis. Tracer studies with I 131 showed a spotty uptake in the thyroid. X-ray of the lungs was normal except for slight emphysema. At operation on 10-29-58 an unusually small nodular thyroid was seen. Multiple adenomata, some cystic, were present and little normal thyroid tissue. The gland was relatively avascular. A left total lobectomy, including isthmus was negative on frozen section examination, followed by subtotal resection on the right, preserving only a thin layer of the posterior capsule, since the right lobe was largely replaced by adenomata. The final pathologic diagnosis was multiple adenomata of thyroid with one small area of papillary carcinoma. No vascular invasion was found. Parathyroid tissue was found on the left.

The patient recovered uneventfully. In July, 1963 ,he was in excellent health, 15 years after treatment for Hodgkin's disease, 5 years after thyroidectomy for cancer. There was no clinical evidence of hypothyroidism, no cervical adenopathy, and x-ray of lungs showed no visible pathology other than a calcified primary complex.

Summary

A patient treated in 1948 for Hodgkin's disease of neck and mediastium at age 15, developed multiple adenomata and a small focus of papillary carcinoma in the thyroid ten years later. Each lobe of the thyroid probably received 1500r within three months. Following left total and right subtotal thyroidectomy he remains well, 15 years since irradiation for Hodgkin's disease and 5 years since his thyroid cancer was found.

REFERENCES

1. Hynes, J. F., and Frelick, R. W.: Roentgen Therapy of Malignant Lymphoma, Am. J. Roent., 70: 247, 1953.

Introduction

Late in 1963, following final clarification by the Internal Revenue Service of the regulations under which the Keogh Act would operate, the Medical Society of Delaware established a Retirement Trust conforming with the provisions of the Act, in which member physicians may participate.

In the opinion of the Committee on Medical Economics and of the Council, the developers of and the participants in the Trust comprise an extraordinarily competent group. Calvin Bullock, Ltd., is responsible for investment counsel on the equity portfolio. Philadelphia Life Insurance Co., is insurance underwriter. Professional Retirement Organization, a group incorporating specialized planners in the technical field of retirement financing from Philadelphia and from Wilmington, is responsible for the operation of the Trust, subject to supervision by an administrative committee of the Society's Council. The Bank of Delaware serves as Trustee.

Both the Medical Economics Committee and the Council are of the opinion that such a trust will provide very real benefits for some physicians. It is equally important, and equally true that this will not be so for every doctor. Whether or not to take advantage of the opportunities of the Trust is a decision that must be made on an individual basis, and with competent legal and accounting advice.

An open meeting of the Society was held March 31, 1964, to which physicians were invited to bring their attorneys and accountants. At that time, Mr. Martin Proyect of Calvin Bullock, Ltd., explained the provisions of the Keogh Act. This is a condensed version of the talk he gave at that time.

THE SEVEN KEYS TO KEOGH

Martin Proyect

If someone approached you and said, "Doctor, I understand you decided not to take your $600 personal exemption this year on your Federal income tax return," you would probably look him straight in the eye and question his sanity. No one ever forgets to take the valuable $600 personal exemption. As true as this may be, *most of the members of the Medical Society will "forget" or fail to take a deduction twice as good as the $600 personal exemption on their 1963 Federal income tax return!*

This potential deduction appears at line 8 of page 1 of the new Federal Income Tax return Form 1040 and is the deduction for your Keogh Act Retirement Program. This deduction can be as great as $1,250 for the self-employed doctor alone, which is over two times the deduction allowed for the personal exemption.

Unfortunately, your Medical Society's plan was not available until late in December of 1963. This resulted from the fact that the Internal Revenue Service waited until well into November before setting up the final rules for qualifying such programs. In spite of this, a few members set up their Keogh Act Plans in 1963 and are taking advantage of their deduction on their current income tax return.

We think other members of the Society will find worthwhile benefits available to them under the Keogh Act and the Medical Society of Delaware Plan. In order to help you consider this matter we are pleased to briefly

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Mr. Proyect is Director of Estate Planning for Calvin Bullock, Ltd., a member of the N. Y. State Bar and a graduate of Columbia Law School. Mr. Proyect specializes in developing and formulating estate planning and pension and profit sharing programs for investment dealers and their clients throughout the country and is a developer of the Society's Keogh Retirement Trust.

FOR SELF-EMPLOYED INDIVIDUALS					
1. Assumed earnings from self-employed activity (net after employee salaries)	$12,000	$18,000	$25,000	$30,000	$40,000
2. Assumed income from other taxable sources (securities, etc.)	-0-	1,000	1,500	2,000	3,000
3. Total of items 1 and 2	12,000	19,000	26,500	32,000	43,000
4. Assumed deductions and exemptions	1,200	2,400	3,600	4,000	5,000
5. Net taxable income (item 3 minus 4)	10,800	16,600	22,900	28,000	38,000
6. Maximum deposit under Keogh (10% of item 1 but not more than $2,500)	1,200	1,800	2,500	2,500	2,500
7. Item 6 as % of item 1	10%	10%	10%	8.3%	6.25%
8. Maximum amount that can be set aside free of current income tax (½ of item 6)	600	900	1250	1250	1250
9. Maximum tax bracket of self-employed person (per 1963 tax tables)	26%	34%	38%	43%	53%
10. Employer's tax saving (item 9 x item 8)	$156	$306	$475	$537	0662
FOR EMPLOYEES					
11. Total employee payroll	-0-	$ 4,000	$ 5,000	$ 7,000	$10,000
12. Percent of payroll deposited under Keogh (must be at least as high as item 7)	-0-	10%	10%	8.3%	6.25%
13. Amount deposited for employees (item 11 x item 12)	-0-	$400	$500	$581	$625
14. Employer's top tax rate (%) deposits (item 13 x item 14)	26%	34%	38%	43%	53%
15. Employer's tax saving on employee	-0-	$136	$190	$250	$331
NET $ RESULT FOR SELF-EMPLOYED INDIVIDUALS					
16. $'s gained (lost) as result of Keogh Plan (item 10-plus item 15-less item 13)	$156	$42	$165	$206	$368

outline the highlights of the Keogh Act which we will call "The Seven Keys to Keogh."

Key 1—Include Employees

A self employed person must include all of his full-time employees under the Keogh Act plan if the employees have worked for him a period of at least three years. Full-time employees are defined as persons working more than 20 hours a week and over 5 months a year. Thus, if a doctor has a nurse who has worked for him for 10 years but she only works 18 hours a week he need not include her under his retirement program. On the other hand, he can be more liberal than the law requires. Even though an employee has only worked for him for two years, or even though an employee is a part-time employee, he may include her if he desires. Under Key 7, you may see the advantages of including employees even though they need not be included.

Key 2—Vesting

If a self-employed person sets up a plan and includes any employees under the plan, then all employees must have 100 per cent "vesting.' This means that if the employee leaves, she does not forfeit any amounts already contributed on her behalf, plus the earnings thereon. The Goverment requires this because the self-employed person (her employer) will never forfeit any amounts he contributes on his own behalf.

Key 3—Percentage Requirement

The Keogh Act states that where employees are covered under a plan, the self-employed person cannot contribute a higher percentage of his earned income than the percentage of compensation contributed for his employees. This is extremely important. The law does not require that the same dollar amounts be contributed for a doctor and his nurse; it merely requires that the same *percentage* be contributed. Therefore, if a doctor makes $20,000 and his nurse makes $4,000, he has complied with the law if he contributes 10%, or $2,000, for himself, and only $400 for his nurse.

Key 4—Limitation On Contributions

The Keogh Act specifies a maximum amount which can be contributed for self-employed persons. This amount is not more than 10% of earned income or $2,500, whichever is less. This means that if a self-employed person makes $25,000 per year, the maximum amount he will be able to contribute will be 10% of his earned income. If he makes over $25,000 per year, the maximum amount he will contribute is $2,500. This brings up a very important consideration. Assuming a self employed person makes $50,000 per year, he could only contribute a maximum of $2,500 for himself. Now, $2,500 is only 5%, not 10%, of $50,000. If you will recall Key 3, if the self-employed person only puts in 5% for himself, he need only contribute 5% for his employee. This is a very unusual, but important, factor in the Keogh Act. The more you earn over $25,000 per year, the less you have to contribute, percentage wise, for your employees!

Key 5—Deductions

The law permits a tax deduction for contributions made. The actual deduction depends upon whether the contribution was made on behalf of the self-employed person or whether it was made on behalf of an employee. With regard to the self-employed person, one-half of the amount contributed is tax deductible. If a doctor contributes $2,500, he receives a tax deduction of $1,250. With regard to the amount contributed on behalf of an employee, 100% is tax deductible. Assuming a doctor contributes $2,500 for himself and $300 for his nurse, his tax deduction would be $1,250 plus $300 for a total of $1,550.

Key 6—Tax Free Accumulation

This is unquestionably the most important rule of all. Even if the Keogh Act would not allow any tax deduction for contributions, it would still have tremendous advantages. All contributions made receive a tax shelter. The *dividends, interest* and *capital gains* and *other earnings* on the total contributions *can be received and reinvested completely free of Federal income taxes during the years of accumulation!* This is not tax exemption but tax deferment, since at some later date, taxes will have to be paid. However, it is generally possible to select a year or years in which your income tax bracket is much lower than it is today so that considerable tax savings can be realized. It is sometimes difficult for us to conceive of the amount of money that can be accumulated when no taxes are withheld each year. We are so used to paying taxes in our daily lives that it would be astounding to learn how inexpensive a gallon of gasoline, or a package of cigarettes, or a bottle of Scotch is without the many taxes imposed. Let us examine the possible accumulations available under a retirement program. A lady executive worked for the famous book publishing firm of Prentice-Hall. In 1949 she became eligible to participate in that company's profit sharing plan, and during the next 11 years a total of about $40,000 was contributed on her behalf. These contributions were invested wisely in a rising stock market and when this lady retired in 1960, her share of the Prentice-Hall profit sharing plan was worth $228,000. Now, no one is going to guarantee that if $40,000 is contributed to a retirement plan it will appreciate to $228,000 over 11 years. This will depend on how much moneys are invested, the investments which are made and the state of our economy over the next 11 years. But in any event, it is fairly obvious that whatever investments are made, an investor will have a great deal more 11 years from now, or 15 years from now, or 20 years from now, or 25 years from now, if the earnings on such investments can be reinvested tax free year after year. *And please remember this.* This tax free accumulation of earnings available under the Keogh Act is identical with the tax free accumulation of earnings permitted corporate pension and profit sharing plans. Therefore, the most important aspect of corporate retirement programs and Keogh Act retirement programs is treated identically under our tax laws.

Key 7—Voluntary Contributions

If a self-employed person sets up a plan which covers only himself, he can only make a business contribution of 10% of his earned income or $2,500, whichever is less. However, if his plan covers one or more employees, the law says that he and the employees can make voluntary contributions in addition to the business contributions. The limitations on voluntary contributions is another 10% of earned income or $2,500, whichever is less. Therefore, under the Keogh Act a self-employed person can put aside up to $5,000 per year and have the earnings on the full $5,000 accumulate tax free. Make sure that you understand voluntary contributions. These contributions are not deductible, so that the only advantage to making them is that earnings will accumulate under the same tax shelter on the voluntary contributions as they will on the business contributions. The self-employed person makes his own voluntary contributions, and the employee makes her own. The self-employed person does not have to make a voluntary contribution on behalf of his employee, and if the employee refuses to make voluntary contributions, the self-employed person can still make his voluntary contributions. The only requirement in the law is that employees have the right to make voluntary contributions.

Perhaps you have by now decided to consider taking advantage of the Keogh Act. Certainly, you will wish to examine the plan sponsored by your own State Society—but what about the AMA Plan or the many programs offered by mutual funds and insurance companies? We believe any sound plan must offer the following: a wide choice of funding media, flexibility, and a strong local servicing organization. The Group Retirement Plan of the Medical Society of Delaware has all these characteristics.

Funding Media—The Plan offers the following investment options:

1) An insurance annuity
2) An equity fund specifically designed and managed for the members of this Society.
3) Life Insurance contracts
4) Any combination of the above

The variety of options allows you to create a tailor-made retirement plan which will fit well with your existing financial plans. The fourth option listed—the combination plan or what we call *Split-Funding*, deserves special mention. To our knowledge, no other trusteed plan offers this unique life insurance/equity combination. Briefly described, it is an insured retirement program much like the pension plans used by many corporations. The insurance portion of the contributions, (usually a maximum of about 40%) is used to purchase an insurance contract which provides a fixed face amount of life insurance immediately and guaranteed cash values increasing over a period of accumulation. The balance of the contribution is placed in the equity fund. Since a life insurance policy can be considered a bond paying a predetermined interest rate, this type of a program can be said to have "balance"-fixed obligations (life insurance contracts) and equities.

Perhaps more important than the "balance" is the unique annuity benefit available at retirement. The life insurance carrier (Philadelphia Life Insurance Company), will allow each participant to use his cash value at retirement to purchase an annuity but—*and this is important*—at today's annuity rates.

What will life expectancy be for a sixty or seventy year old, ten, twenty or thirty years from now? No one knows for sure, but it is reasonable to assume it will be longer and annuity rates will then surely be higher. But this is only part of the story.

Because the insurance was purchased as part of the plan sponsored by the Medical Society of Delaware, Philadelphia Life will permit each participant who so wishes to use the proceeds of the equity fund to purchase additional annuity income again at the annuity rates in effect when the plan was first installed.

Flexibility—One dictionary defines flexible as "capable of being turned or forced from a straight line or form without breaking." Business conditions and personal circumstances and needs are constantly changing. A good retirement program must be able to respond to those changes—and without "breaking."

The Medical Society program has this kind of flexibility. It not only offers a variety of investment alternatives but it also allows you the right to change from one to another or to vary the porportion of your contribution between the various options. Thus if you had been investing 100 per cent of your contributions in equities you could, if it seemed desirable to you, switch part or all your trust assets over to an annuity, insurance or U.S. Government Bonds. In addition, the plan is fully trusteed and therefore more versatile than a custodial type plan. It gives you the freedom to transfer your trust assets and future contribution to any other approved trusteed plan. For example, let's say you participate in the Medical Society of Delaware Plan for five years with all contributions being made to the equity fund. At the end of this time you decide you would rather have your retirement fund handled through the AMA program. You would merely instruct your trustee here to transfer the assets in your trust to the trustee for the AMA and continue your regular contribution under that plan.

Building a retirement fund under Keogh through a trust arrangement can have substantial tax benefits at retirement. Let's suppose you had used the combination option—a life insurance contract and equities—to build your fund. At retirement you might instruct the trustee to liquidate your equities and with these proceeds plus the cash value of your life insurance policy, purchase an annuity. Since the liquidation of trust assets took place under a tax-exempt trust, there would be no tax liability—no lump sum payment—to you until you started to receive your monthly annuity payments. This is of course only one of the ways a trust can provide flexibility at retirement.

Servicing—The most important single aspect of a good plan is the availability of competent advisors. No one buys a television set, or a car, or a complicated piece of office machinery, no matter how attractively advertised, without being sure that capable service facilities are near at hand. The Keogh Act is a comprehensive law which requires careful study and interpretation if it is to be employed to its maximum advantage. Through the various local participating institutions and individuals we offer you, your legal advisor and accountant, a full staff of experienced personnel to help you determine what course of action is best for you.

This program was developed and is corordinated by PRO, Incorporated,* specifically for the Medical Society of Delaware.

The principal function of PRO is to see that the members of the Society are kept well informed on Keogh and that specialists, insurance or investment depending on need, are available to discuss the act and this plan in relation to individual circumstances. We suggest that each of you should now carefully consider establishing a tax deferred retirement plan best suited to your needs.

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*For further information you may call or write: PRO, Incorporated, The Professional Retirement Organization, 121 South Broad Street, Philadelphia 7, Pennsylvania, telephone, PE 5-6955.

REMINDER
THE MEDICAL SOCIETY OF DELAWARE — 175th ANNUAL MEETING
SEPTEMBER 11, 1964 — LEWES, DELAWARE

AN HISTORICAL REFLECTION ON THE MEDICO-SOCIAL ASPECTS OF EPILEPSY

• Historically the viewpoints of epilepsy have undergone frequent changes. New beliefs or new facts discovered made older theories obsolete. The authors review these changes as well as the impact of this disease upon historical persons.

George E. Voegele, M.D.
Hans J. Dietze, M.D.

"Oft too some wretch, before our startled sight,
Struck as with lightning, by some keen disease
Drops sudden:—by the dread attack o'erpowered
He foams, he groans, he trembles, and he faints;
Now rigid, now convulsed, his laboring lungs
Heave quick, and quivers each exhausted limb,
Spread through the frame, so deep the dire disease
Perturbs his spirit: as the briny main
Foams through each wave beneath the tempest's ire."
Lucretius the Epicurean (95-55 B.C.)

Epilepsy or "the falling sickness" is the oldest known disorder of the central nervous system. It is really not a unitary disease but rather a syndrome with heterogeneous etiology with the essential feature of a sudden episodic disturbance of brain tissue function.

It is mentioned in Hammurabi's laws as early as 2080 B.C. and has always been of great medico-social importance. *"It has undoubtedly played its part in the organization of religion and the destinies of nations. It is well known that the disease helped give rise by its manifestations to the ghost-soul belief and to that theory of demoniac possession which still lingers in regard to mental diseases."* (Myerson[1])

At the dawn of history this illness must have made a deep impression upon the naive spectator when a previously normal-acting person suddenly changed his behavior showing convulsions, unconsciousness, yelling and other psychic and physical disturbances as well as disturbances of the autonomic nervous system. Since earliest times, no other illness has created so much awe, horror, sympathy and superstition as epilepsy. Every conceivable causation has been looked for to explain epilepsy, and every pharmacological and nonpharmacological rational and irrational treatment has been employed. Frequently the illness was interpreted as a punishment sent by a god, especially by a lunar deity. On the other hand, seizures were regarded as divine manifestations and the sounds which an epileptic uttered during his convulsions were interpreted as the voice of the deity. (Hippocrates, for example, considered the priestesses who chanted their oracles after convulsing as epileptics. Although here he had seemingly some difficulties to distinguish epilepsy from hysteria, or possbily from intoxication from inhaled mephitic hydrocarbon gases). Epilepsy was a type of mental illnes with which the ancients were especially familiar. It was long known to them as 'the sacred disease."

The old Hebrews and Egyptians considered epileptic patients as sacrosanct. In Biblical times the custom is reported of spitting on a

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patient when he had a seizure since it was believed that thus one could avoid being possessed by the same evil, seizure-provoking spirit. From this comes the name 'Morbus Insputatus." The Talmud believes that epilepsy is caused in the children by the behavior of the parents during cohabitation.

The Greek Belief

During the pre-Hippocratic era the Greeks held different gods responsible for causing epilepsy. They, as other ancient people, adhered to mystical beliefs in regard to epilepsy (and mental disorders in general) and customarily treated epileptics by offering prayers and sacrifices at the temples of Asklepios and by purification and incantations. Hippocrates (*460-357 B.C.*) expressed the first modern viewpoints in regard to epilepsy in his treatise "On the Sacred Disease," thus starting the scientific approach to the study of epilepsy. Utilizing his practice of empirical clinical observations, separating superstition from medcine, he considered epilepsy a disease of the brain and could not find anything supernatural in this illness. He felt that if epilepsy should be called sacred because of bizarre symptoms then he would have to call many illnesses sacred. With his customary insight, he stated that "the sacred disease appears to me to be no more divine nor more sacred than other diseases, but has a natural cause from which it originates like other afflictions. Men regard its nature and cause as divine from ignorance, and wonder because it is not like other diseases." During this time epilepsy was even shown on the stage. Euripides described an epileptic furor in his play "The Phrenzy of Hercules." This was based on the belief that Hercules was an epileptic. He was supposed to have had seizures when associating with the gods. Therefore the disease was also known among the Greeks as "Morbus Herculi."

The scientific viewpoint of Greece's Golden Age was soon forgotten or neglected and superstitious opinions dominated again. The belief in demonic origin of epilepsy reverberates in Luke's description of Christ's casting out the unclean spirit in an epileptic boy: " a spirit taketh him and he suddenly crieth out; and it teareth him that he foameth again and bruising him hardly departeth from him." (*Luke 9:39*) Another example is the antique Roman custom that if someone during a public meeting (*Latin*: *comitium*) suffered a seizure, the meeting had immediately to be adjourned because of the unlucky omen such a seizure would portend. The term, "mal comitial" or "crises comitiales," for epilepsy which occasionally can still be heard in France is a reminder of this Roman custom, southern France having been a Roman province for centuries. In general the insights gained by Hippocrates were soon altered, neglected or forgotten. For example, in 370 A.D. St. Basil modified Hippocrates by declaring that not all seizures are produced by nature. Some he believed are sent by God as punishment and some are the curse of the devil. However, a few Greek and Latin physicians carried on Hippocrates' tradition in Rome, e.g. Aretaeus, Caelius Aurelianus or Pelops. The latter coined the term "aura" (Latin—breeze) for premonitory signs of a seizure because one of his patients experienced a light wind blowing on his face before each attack. His pupil Galen (second century A.D.) taught that epilepsy originated in the brain. However, he believed the seizure was caused by fluids obstructing the brain ventricles. Aetius of Amida, Emporer Justinian's court physician (6th century A.D.) called epilepsy the Herculean disease because he associated the illness mainly with an athletic Hercules-like physique.

The Invasion Of The Arabs

While the classical Greek medical heritage disappeared completely in the dark ages of Europe, it was saved by the Arabs who invaded and conquered large parts of the Christian world (until in 731 A.D. Karl Martell turned the tide in Europe). With a grain of salt, one could blame epilepsy for these conquests since the prophet Mohammed, himself an epileptic, urged his followers to carry on a holy war and to unite the world under Allah. The conquerors preserved the wisdom of the Greeks and Romans and with it the heritage of Hippocratic Medicine. Already Al Mansur, the second caliph of Bagdad (*745-*

757) collected one of the finest libraries of his time and commanded scribes to translate the great Greek and Roman classics into Arabic. From there these books were copied for the other centers of Arabian learning in Spain, Sicily and Southern Italy, and with the help of Arabian and Jewish physicians (the latter seeking refuge from the intolerant Christians) medicine flourished under the Caliphs and epilepsy was considered a natural illness. Avicenna, an Arabian court physician, gave the illness the name which we still use, "Epilepsy" stemming from the Greek word "Epilambano," meaning literally "to be seized, to be attacked."

And Witchcraft Flourished

Medieval Europe, on the other hand, left the treatment to priests and monks, and superstitious beliefs in witchcraft and the like flourished. Treatment by herbs and binding with chains and fetters are mentioned already in old Saxon chronicles. Certain wells were believed to have special healing powers. The medieval attitudes towards epilepsy varied with time and place. Among others, epilepsy was considered as correlated with moon cycles, or the effect of sexual excesses or perversion. Until the beginning of the 16th century, epilepsy was considered contagious and special isolation hospitals were erected for epileptics. However, under the influence of Arabic medicine, especially in Cordova in Spain and in the famous medical school of Salerno in southern Italy, the classical Greek concept of the healing arts were slowly revived in Europe. As a consequence, during the Renaissance, some more enlightened physicians were able to recognize epilepsy as a natural disease; e.g., Fernelius, Erastus, Agrippa von Nettesheim, Levinus Lemnicus and Weyer.

The Renaissance physicians, although believing in natural causes of epilepsy, nevertheless were strongly influenced by Galen's humoral theories of the etiology of epilepsy. An exception was Paracelcus von Hohenheim (*1493-1541*) who denied Galen's teachings of epilepsy that fluid blocking the ventricles caused epilepsy. Charles le Pois (*1563-1636*) was probably the first to say clearly that epilepsy is of cerebral origin. Generally it took about 2000 years after Hippocrates until a new scientific approach of investigating epilepsy replaced the dogmatic following of the writings of the ancients. This took place in the 17th century and was initiated by Thomas Willis and Hermann Boerhaave. Both searched for the causes in the brain and Boerhaave recognized the important fact of heredity. He also differentiated the existence of petit mal. Under their influence, the treatment of epilepsy became more rational discarding occult treatments. This was in accord with this age of rationalism. This tradition gained more widespread recognition during the era of enlightenment by, among others, Boissier de Sauvages and Georget. However, medical opinion still clung to the old belief of lunar influence upon seizures, until Moreau proved by his findings in 1854 that there was no relation between the moon and epilepsy. Also masturbation was still considered a causal factor by Gowers in 1881. The 19th century stressed the hereditary aspects of epilepsy, to mention only Oppenheim. With Hughlings Jackson begins finally the modern era of epilepsy.

Special Spiritual Gifts

When investigating the history of epilepsy one encounters persons afflicted with this illness. They have been respected as Shamans (e.g. boys with epilepsy were preferred as neophytes in the order of medicine men by Siberian tribes). They have been looked upon as saints and revered as people possessed by God. They frequently did not pass as what we would consider sick but rather were viewed as having special spiritual gifts. But at other times, epileptics have been loathed as fools, excluded from public community as dangerously "possessed" or even destroyed or burned as witches. Even now many persons, from prejudice or ignorance, feel that a person with epilepsy will somehow fail to make an adequate social adjustment. Considering historic epileptics we must view them in the context of their historical social mileu. In mental states "associated with electroencephalographically demonstrated disturbance of brain function or with brain damage of any kind, the specific symptomatology not only depends on the extent, localization, and particular pattern of cerebral dysfunction but is a resultant of this dysfunction and the personality and previous experiences of the individual." (*Strauss*[2]) The two latter factors depend on culturally determined historical conditions, the setting of social forces that sustain and direct the growth process decisively and form the psychological and social characteristics of the individual.

Noted Epileptics

There were a number of famous historical persons who have been said to be epileptics. This is based on historical reports and/or a modern interpretation of the symptoms of their illness. Naturally, since we cannot subject them to modern observations and examinations, including EEG, there is by necessity an amount of speculation involved. Already the Old Testament describes Balaam as seeing "the vision of the Almighty when falling into a trance, but having his eyes open." The Egyptian Pharaoh Ikhnaton, the so-called heretic Pharaoh was reported suffering from epilepsy. He tried, unsuccessfully, to substitute the traditional Egyptian polytheism with a monotheistic religion by worshipping only one god, the Sun god. The Persian King Cambyses who defeated Egypt suffered also from epilepsy and may have died in an epileptic seizure. The Greek philosopher, Pythagoras, (*500 B.C.*), the founder of a religious brotherhood which was the first to reduce the earth to the status of a planet revolving around a fixed point, suffered also from epilepsy.

The most famous epileptic, of course, was the Roman, Gaius Julius Caesar, an extraordinarily versatile man, excelling in war strategy, oratory, statesmanship and social grace. Shakespeare puts the description of Caesar's illness in the mouth of Cassius in his play "Julius Caesar:" "*and when the fit was on him, I did mark how he did shake; 'tis true this god did shake. His coward lips did from their color fly, and that same eye whose bend doth awe the world did lose his lustre; I did hear him groan.*" In hardly anybody's life has the sacred disease played such an important part as in the fate of this Roman statesman. It was on the sixth day of February, 46 B.D. Caesar was just preparing the decisive battle of Thapsus in North Africa, when he suddenly felt the aura indicating the onset of a seizure. Caesar's illness did not start suddenly without warning. On the contrary, the aura preceding the paroxysmal attack seems to have been one of considerable duration in his case. It also presented him with a nearly visionary lucidity. Since Caesar knew his illness, he utilized this and drew up the battle plans for Thapsus during this state of altered and in his case improved consciousness. A a result Caesar's victory at Thapsus destroyed his opposition, making him the sole ruler of the then known world. It might have been a kind of psychic seizure not associated with unconsciousness. Such a psychic seizure may be the only symptom or may come as an aura heralding a severe attack of a more generalized type. Penfield and Jasper[3] describe it as "a positive psychical state, positive in the sense that some hold is retained on consciousness and some memory of the mental experience will continue into the postictal period." In Caesar's psychic seizures changes in sensation and thought content related to automatic thinking (intellectual aura) appear to have been present. Strauss[2] illustrates such psychic seizures: "One of my patients reports that everything she sees or hears is extremely clear to her. Also *her* own thinking is more clear, more vivacious." . . . Still another patient reports that, while the content of her thinking is in no way disturbed, she has a disturbance in the tempo of her thinking, so that her mind seems to race very quickly." K. Jaspers[4] similarly mentions "the unusual brilliant states of narrowed consciousness occurring as an aura in epileptic attacks . . . One patient described it as if thinking became absolutely clear."

In Caesar's example we see clearly that genius and epilepsy do not exclude each other —on the contrary. This is not only so in the areas of military strategy and statecraft, but also in other fields of creative productivity. This is demonstrated in history by the examples of philosophers, poets, painters, composers and founders of religions. Many Christian saints' visions might have been related to the aura or other phases of epilepsy. This also seems to be true of St. Paul. He reports himself in II Corinthians 12:7 "There was given to me a thorn in the flesh, the messenger of Satan to buffet me," probably epilepsy. But especially the crisis in his life which was connected with a sudden, abrupt falling to earth on the way to Damascus, and which changed a dangerous enemy into the most eager of the apostles of the new faith and consequently changed the course of Christianity and world history, leads one to think of epilepsy. (*Acts 26:31 and 14*).

Mohammed

In all probability one can also assume the existence of the sacred disease in the prophet Mohammed. He retired into the cave of Hera near Mecca whenever he felt prodromal signs announcing the onset of an attack. About 612 A.D. he experienced there in such an epileptic state of altered consciousness a vision of the Archangel Gabriel that inspired him to found the most recent of the world's great religions. In this cave he also received his revelations in trancelike seizures which were then collected by his followers into a book, the Koran. They believed that the Koran was inscribed with a pen of light on the table of god's everlasting decrees. A paper copy in a volume of silk and gems was brought down to the lowest heaven by the angel Gabriel. This messenger successively revealed the verses to the prophet in his cave. In another episode Mohammed visited Paradise. He "made this visit on a mysterious animal, the Borak, who conveyed the prophet from the temple of Mecca to that of Jerusalem. With his companion, the angel Gabriel, he successively ascended the seven heavens and received and repaid the salutations of the patriarchs, prophets and angels. Beyond the seventh heaven, Mohammed alone was allowed to proceed and approach within two bow shots the throne, feeling a cold that pierced to his head, when his shoulder was touched by the hands of god. After this he again descended to Jerusalem, remounted the Borak, returned to Mecca and performed in the tenth part of the night a journey of many thousand years." (*Gibbon*)[5]

This is a good example of a hallucinatory seizure which according to Penfield and Jasper[3] "resemble true dreams. They are not altered perceptions of present experience, like illusions. Instead, the content of the hallucination is apt to be quite independent of environment. It may be a vivid memory or a dream, during which some awareness of the individual's environment may be retained." Dostoevski reflects about this: "Mohammed tells in his Koran about his visit into Paradise. All clever fools insist, that he was a liar and mountebank. But this is not true. He does not lie. He was undoubtedly in Paradise, but during an epileptic attack—an illness from which he was suffering like myself."

Among other famous persons who were reportedly epileptics are Alexander the Great, Dante, Louis XII of France, Moliere, Napoleon the first, Pope Pius IX, who announced the dogma of the Immaculate conception, Swenbourne, Swift, the composer Hector Berlioz and the poet Flaubert.

Dostoevski

Nobody has so impressively felt and so convincingly described the influence of epilepsy upon his artistic work and his creative powers as the Russian writer Dostoevski whose works show a deep intuitive knowledge of human psychology. In the aura of his illness he experienced a feeling of extreme happiness and complete harmony with the world and himself. A feeling must have filled him with a passion for poetic intuition. He, therefore, would not willingly have given up this euphoric epileptic experience even though the following convulsive attacks were very severe. We gain a deep understanding of the fertile effect emanating from this epileptic aura in his own descriptions: "And I felt that heaven came down to earth and engulfed me; I experienced God as a deep and lofty truth; I felt invaded by Him. 'Yes, there is a God,' I shouted; after that I do not know what happened. You healthy men can have no idea of the marvelous feelings that pervade an epileptic a second before his attack. I do not know whether they last seconds or hours but believe me I would not exchange them for all the lovely things that life can give.' "Yes, one such moment is worth a lifetime . . . in these few moments I understand the profound and wonderful sayings: 'there should be Time no longer'."

"There are seconds when suddenly you feel the one eternal harmony that fills all existence. It is as if you suddenly feel the whole of nature within yourself and say, 'yes, this is the truth . . . it is not only love, it is more than love; the clarity of feeling and the overwhelmingness of the joy are terrifying. In these five seconds I live a lifetime and would give my whole life for them . . . development has no point since the goal is reached . . ."

Vincent van Gogh is another example of more recent times for the influence of epilepsy on creative productivity. However, Gogh did not suffer from a "common" epilepsy with convulsive seizures as the most impressive symptom but from an epilepsy with episodes of disturbance of the state of consciousness during which the patient is not prostrate but acts more or less automatically and which also might include episodic psychosis, as described by Kleist. It might possibly have been a temporal lobe epilepsy. The increase of our knowledge since the availability of electroencephalography has made it certain that such episodic psychoses with little disturbance of consciousness and a symptomatology resembling that of the affective and schizophrenic psychosis occur in patients with epilepsy, particularly those with temporal lobe foci. The psychiatric discussion of the illness of van Gogh alternated at first between the diagnosis of schizophrenia and epilepsy, since the medical reports do not give any evidence of true seizures. However, lately the epileptic basis for his disease was established. Riese[6] published a paper with the hypothesis that van Gogh was suffering from an episodic psychotic disturbance related to epilepsy in the sense of Kleist. Gastaut[7] in his recent review of all known facts concluded that van Gogh was suffering from psychomotor epilepsy. The strange fate of the artist is known: he suddenly, in a state of altered consciousness, attacked his room mate and colleague, Gauguin. Following this, he cut off his own ear with his razor blade. As an act of atonement he sent it to a prostitute. This resulted in his hospitalization in a mental institution. There he worked in a kind of creative mania painting his color drenched pictures. The more frequently attacks of his illness occurred, the more forceful and hectic became the tempo of his obsessive productivity. During this time of his increasing illness, he painted more pictures than during his whole previous life. That he felt intuitively the relation between this brain disorder and his creative powers is obvious from a sentence he wrote in a letter to his brother, "The more I get out of joint, the more I become sick and crumbled, the more I become an artist."

In conclusion it appears that in many historical persons afflicted with epilepsy the mentality was "of an unusually high degree, as in the case of Caesar and Alexander, etc." (*Neustaedter*).[8] One also must conclude that the illness did not have merely a destructive but also a positive significance. This problem is especially interesting in regard to the influence of the illness upon creativity. Already the old Greeks believed an epileptic to be a superior personality. The Italian criminologist and psychiatrist Lombroso, was of the opinion "that epileptiform neurosis is a factor closely related to genius." However, history does not answer the question whether creativeness was a side effect of the illness or existed regardless or even in spite of the illness. Many historical examples do, however, suggest that the disorder was an ally in the creative performance which made the patient immortal. Plato phrased it thus: *"The greatest good comes to us from a madness which is sent to us by divine favor."*

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Editorials

NURSING EDUCATION

This subject is still foremost in our thoughts and probably it will be for some time to come.

The May 21st issue of the New England Journal of Medicine carried a special article by Dr. Thomas Hale entitled "Why The Nursing Shortage Persists." Dr. Hale is administrative vice-president of the Albany Medical Center Hospital. Dr. Hale has definite ideas which are concurred in by many members of this Society. Whether or not we agree with Dr. Hale, anyone interested in this subject should study his presentation.

On May 27th a special meeting of the New Castle County Medical Society heard Dr. Lester Barnett who is Director of the Department of Surgery at the Monmouth Medical Center. Dr. Barnett gave us first hand information regarding a two year school of nursing which was conceived in 1954, began operation in 1955, and has been graduating nurses since 1957.

Dr. Barnett's presentation was authoritative. Dr. Barnett was enthusiastically in favor of the two year school as it is run at the Monmouth Medical Center. In reply to a question as to whether the two year graduate was equal to the three year graduate at the time of graduation, Dr. Barnett stated an emphatic no.

He did think, however, that by the time the two year graduate had a year of clinical work, she was as good or perhaps better than the three year graduate. Dr. Barnett stated that he and other physicians on the staff took an active part in teaching the student nurses. He believes that the physician has a responsibility in the teaching of student nurses and that the teaching staff of the nursing school in turn has a responsibility to seek help from the physicians.

While the situation in Monmouth County is somewhat different than the situation in New Castle County, there are enough similarities to make Dr. Barnett's remarks most helpful and deserving of further study.

ADAMS-STOKES SYNDROME

In 1827 Robert Adams presented a classic description of heart block. This was again described in 1854 by William Stokes and the loss of consciousness due to cerebral anoxia caused by heart block has been known to this day as "Adams-Stokes Syndrome."

The treatment of this condition has been to a large extent unsuccessful. This is probably due to the fact that there is a difference in mechanism causing the anoxia. In some patients the mechanism is ventricular standstill while in others the mechanism is ventricular fibrillation. Many medications have had their waves of popularity only to be discarded after a time because of obvious worthlessness. Until the discovery of isoproterenol, no medication was reasonably effective. This medication has had a longer period of popularity than any of its predecessors due to the fact that it is effective in a substantial number of patients. From the standpoint of first aid treatment, a solid blow delivered by the fist on the patient's sternum is still the method of choice.

With the advent of electronic pacemakers, there has been a wave of enthusiasm for their use. Many types of pacemakers have been developed and used clinically. Some are external, some have internal electrodes with an external pacemaker, and still others have the entire mechanism implanted in the patient's body. Despite the fact that a fair number of patients with complete heart block get along quite well over a period of years, consideration of a pacemaker now appears to be the proper thing in the management of these patients.

The May 25th issue of the JAMA carries an interesting and thought provoking article by Orgain and his group at Duke University. They describe four patients who were referred for this problem and who were studied by radiotelemetered electrocardiography. It was

(*Continued on Page 123*)

Delaware Academy of General Practice

HEMODIALYSIS FOR DELAWARE GENERAL PRACTITIONERS

The Jay Hughes Memorial Medical Research Foundation of Wilmington exhibited its Kumlon Hemodialyzer at the 59th American Urological Association Meeting held at Pittsburgh, May 11 to 14, 1964.

The scientific exhibit described the Artificial Kidney Program which was originated by the Foundation. It demonstrated and illustrated the use of a parallel plate hemodialyzer designed for maximum surface to volume ratio. Other features include simplicity of operation, greater efficiency, reduction in time of operation, and lower cost. The machine duplicates to some degree the biophysical structure of the natural kidney. This improved type hemodialyzer has been successfully applied to scores of animal tests for performance and reliability. Successful performance was also reported in human use for chronic renal failure.

The exhibit was visited by hundreds of attending physicians and many of the directors of "Kidney Centers" from various parts of the country.

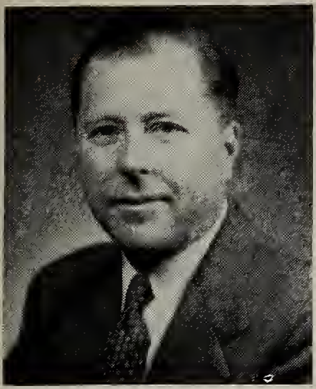
The Pittsburgh Press published an article by George Thomas on May 13, 1964 which stated in part "*Cautious hope of saving more of the thousands of Americans doomed by kidney failure every year is emerging from a national medical meeting here in Pittsburgh. High on the list of causes for this controlled optimism by members of the American Urological Association is an improved high-speed artificial kidney that has just gone into clinical testing.*" The exhibit also received attention from the NBC television station WIIC, Channel 11, Pittsburgh which photographed and showed it on the 6 P.M. news that same day.

Numerous causes leading into acute and chronic renal failure were discussed at the meeting by various authorities in which prompt hemodialysis was given as the treatment of choice. The common clinical applications are transfusion reaction, postpartum renal shutdown, crush syndrome frequently resulting from accidents and renal anoxia, various types of nephritis, and poison removal, such as drugs, chemicals, heavy metals, etc.

Smith et al, Ohio State Medical Journal, 59:1202 (Dec.) 1963, emphasized the need for the artificial kidney in every community hospital by stating "*Acute renal shutdown, a complication of many diseases, occurs regularly but unpredictably, in all hospitals.*" They concluded that the advent of the kidney dialyzer has put hospital dialysis into the hands of the community hospital.

The greatly simplified, more efficient, shorter run, single dialysate passage offered by the Jay Hughes Memorial Medical Research Foundation hemodialyzer, (being in its preliminary stages) is designed to provide in some near future a means for the general practitioners of Delaware of giving their patients this life-saving service as soon as the emergency arises rather than depending upon negotiated transfer to medical centers in nearby states. Understandingly, the hemodialyzer is only an adjunct to alleviate problems in kidney failure and could serve as a valuable supplement to good medical care.

George J. Boines, M.D.



President's Page

SMALLPOX, ARE YOU READY TO MEET IT?

Smallpox and certain other communicable diseases have, in recent years, become increasingly more hazardous to physicians, nurses, hospital and paramedical personnel. The airplane brings visitors great distances in a matter of hours. The travelers come from parts of the world in which smallpox and other communicable diseases are indigenous. On occasions a traveler will land in an area where the prospects of spreading his disease are especially ripe. Among the first persons who become contacts of an infected traveler are doctors, nurses and paramedical personnel. Are you immune enough to be safe?

This is to stress the high importance of keeping continuously immune to smallpox and other communicable diseases. Vaccination against smallpox in doctors, nurses and some other persons should be done at least annually as a safeguard against the day when inadvertently and unknowingly a contact with the disease comes along. Don't be caught napping.

Any immunization program should start at home. All physicians should keep this in mind. Begin the program with yourself, your office staff and then take it into your hospital. Don't forget to recommend that your police, customs and other personnel who also face the same danger know the facts and have an opportunity to be protected. Should that infectious contact occur, be ready. Check your immunization status today.

Floyd T. Hudson

In Brief

Child Development Center Planned

A first in Delaware—the new Child Diagnostic and Development Center is scheduled to open in January, 1965. Henry H. Stroud, M.D., Wilmington pediatrician, has been appointed Executive Director, as announced by Robert O. Y. Warren, M.D., chairman of the Center's Board of Founders. The Center, to be located at 1202 Jefferson St., Wilmington, will offer no treatment but will provide a central point where children with physical and mental handicaps can be sent for evaluation of their problems.

Labeling Drugs

It is vital for the visiting nurse to be familiar with the drugs she is administering so that she can be alert for any drug reaction that might occur. The Medical Advisory Committee of the Visiting Nurse Association, discussed this and stressed the importance of labeling drugs which are to be administered to home-bound patients. *Elton Resnick, M.D., Chairman.*

Phenothiazines Have Broad Action

New evidence indicates that phenothiazines improve the passive, withdrawn, apathetic patient even more that the agitated, abusive one, according to results of a 9- hospital collaborative study conducted by the National Institute of Mental Health. Tests showed that symptoms which are usually regarded as "target symptoms" such as hostility, agitation, anxiety, etc.—were not affected to as great a degree by the phenothiazines, as those which are considered fundamental to schizophrenia—poor social participation, poor self care, confusion, indifference to environment, etc.

Warning

Examinations of the triplicate copies of the official opium order forms reveal that many of the forms are signed by unauthorized persons. Official narcotic order forms shall be signed by the purchasing registrant in the same form as on the application for registration or may be signed by another authorized person. The Treasury Department of the U.S. finds that most of these violations occur at the retail level. Therefore, all registrants are cautioned to avoid violating the regulations by properly executing these official order forms. *Treasury Dept., Bureau of Narcotics*

Statement On Radiation Exposure

The International Commission on Radiological Protection recommends that abdominal and pelvic x-rays of women of child-bearing age be limited to the first ten days of their monthly menstrual cycles—when pregnancy is least likely. The American College of Radiology reaffirmed its position that medical judgment must be the deciding factor. For years the College has recommended that examinations of the pelvis be postponed beyond early pregnancy. Occasions on which this policy becomes important are infrequent because the majority of patients are referred to a radiologist because the physician usually needs the diagnostic x-ray information immediately and for very adequate reasons.

Personal Glimpses

Otakar J. Pollak, M.D., has been elected to honorary membership in the Italian Society for the Study of Arteriosclerosis . . . Lemuel C. McGee, M.D., was moderator on a panel titled "Medical Barriers to Employment of the Handicapped" at a meeting of the President's Committee. Dr. McGee questioned the validity of the term "Medical Barriers"—for example, fellow workers object to epileptics in a unit because they fear seizure; employers have fears such as "workman's compensation might increase" . . . . Richard N. Taylor, M.D., has been re-elected president of the Delaware Heart Association; Lemuel C. McGee, M.D., senior vice-president . . . directors re-elected to three-year terms are: Drs. J. Richard Durham, Edward M. Krieger, David A. Levitsky, Charles Levy, Joseph M. Messick and Arthur Tormet; Theodore Lawrence, M.D., was elected to his first term on the board . . .

The Delaware Academy Of Ophthalmology

At a recent organization meeting at which a new specialized medical group was formed by Delaware's eye, ear, nose and throat physicians and surgeons. Bayard R. Vincent, M.D., president pro tem, presided until the slate of officers presented by the nominating committee were elected. They are as follows: William H. Kratka, M.D., Wilmington, president; J. Robert Fox, M.D., Dover, vice president; Floyd Harrision, M.D., Wilmington, secretary and William Rath, M.D., Wilmington, treasurer.

A New Menace

Book matches contain chromate, a substance that can cause allergic contact dermatitis in susceptible individuals. According to Dr. Sigfrid Fregert—University of Lund, Sweden—tips of fingers and thumbs become contaminated with chromate by grasping matchheads in tearing off the matches—espeecially if fingers are clammy or moist. Contamination can then spread to other parts of the hand. *Modern Medicine, February, 1964.*

Drub By SKF Available And Free

Special Resin No. 648, a public service drug used in the treatment of hyperkalemia, has been supplied free of charge since 1951 by Smith Kline & French and will be continued as an investigational drug. A new application for the resin was filed with the Food and Drug Administration in May, 1963. Because of the rare incidence of hyperkalemia, SKF had never applied for marketing clearance prior to the revision of the FDA drug-testing regulations in 1962. Special Resin No. 648, for control of hyperkalemia arising from severe renal insufficiency associated with oliguria or anuria, is supplied in one-pound bottles. Emergency supplies may be obtained in less than 24 hours directly from SKF representatives or by telephoning LO 4-2400, in Philadelphia.

New Research Center

At the dedication of New York University's Environmental Medicine Research Center, Dr. Robert Anderson, assistant surgeon general, expressed hope that work done in its laboratories would contribute importantly to the solution of the pesticides problem. He added that we have very little in the way of integrated conclusions regarding the biological action of these chemicals in living organisms or about their immediate and long-range effect on our environment.

Auxiliary Affairs

FUTURE NURSE CLUBS

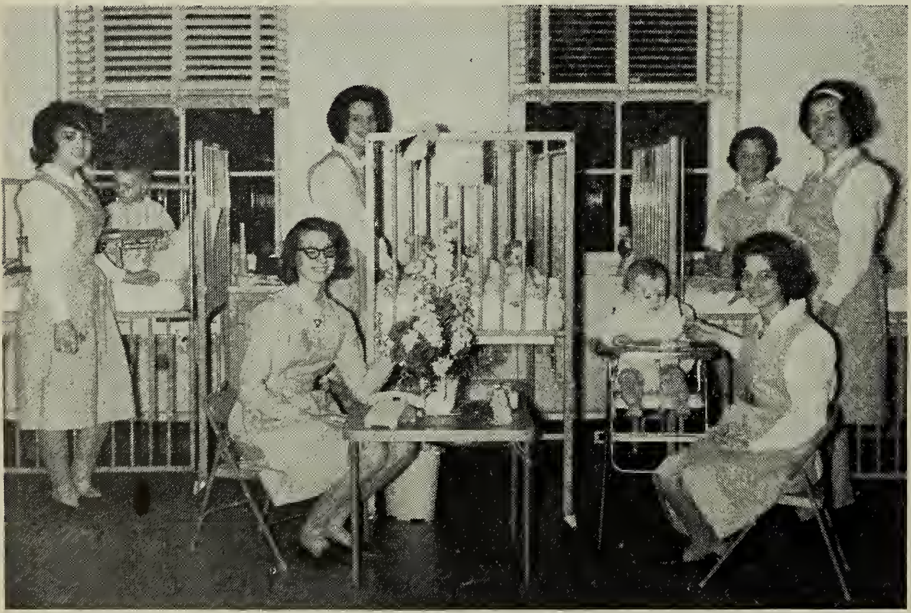
The Woman's Auxiliary to the Kent County Medical Society began sponsorship of Future Nurse Clubs in 1956, with the school nurse as advisor. The high school girls began assisting in the Dover Hospital; and in their groups learned more of nursing requirements and opportunities. Each year they have toured the Delaware schools of nursing. Serving as an aide to the hospital proved so popular both with the students and the hospitals that the Auxiliary purchased 12 pinafores.

All of the clubs are now nationally chartered. They serve others in nearby hospitals, nursing homes and other institutions. The girls make tray favors, write letters, feed the young and the old, and assist where they can. One club raises money through bake sales and gives $100.00 to each former club member when she receives her cap. Another club has received the *Parents Magazine Youth Achievement Award* for the past four years for "outstanding community service." This year all of the clubs attended a day at the University of Delaware School of Nursing, which included a tour of the campus and affiliating hospital.

The Auxiliary awards a book to the outstanding girl from each club upon graduation. Each spring a tea is held for the juniors, seniors and the nurse advisors. The program this year featured a display of nurse's caps and their history, from nearby nursing schools.

A total of 241 girls are enrolled in 7 clubs. Some clubs have been in existence only a short time, yet 73 girls have entered training. Twenty-five girls have been graduated from schools of nursing, five girls from allied professional schools, others are still in training. This would seem to be a remarkable record for such a recent endeavor.

The accompanying pictures are candid photographs depicting the various activities of the Future Nurse Clubs.



The top corner picture shows a group of "Future Nurses" from the John Bassett Moore High School Club. These girls hopped from room to room distributing colored Easter eggs to residents of the Welfare Home in Smyrna.

To the left are a group of "Future Nurses" at work in the Kent Hospital, Dover.

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THE PREVENTION OF ACTIVE TUBULAR NECROSIS IN HEMORRHAGIC SHOCK

● There have been many recent advances in the treatment of shock. This is the first of a series of articles to appear on the subject which was discussed at a Joint Surgical Conference combining the departments of the Delaware, Memorial and Wilmington General Hospitals.*

Robert B. Flinn, M.D.

Although rapid surgical hemostasis and restoration of normal blood volume by transfusions are still the most important actions to be taken for the treatment of hemorrhagic shock, there are now several additional things that a physician may do in an attempt to prevent the development of a complicating acute tubular necrosis.[1] Through the mechanism of auto-regulation within the kidney, any slight fall in blood pressure may be accompanied by a marked fall in renal blood flow and glomerular filtration rate. Frequently, following a drop in blood volume, compensatory vasoconstriction prevents a measurable fall in systemic blood pressure while there may be a marked decrease in renal blood flow.[6] This, in the sensitized kidney, may lead to acute tubular necrosis. As a clinical guide to evaluate the integrity of the renal tubule, examination of the urine from an oliguric patient may be helpful. In figure (1) it may be seen that the intact kidney of the patient in shock will produce a hypertonic urine with an elevated specific gravity, low sodium concentration (0-20 meq/L), and high urea concentration (urinary to plasma ratio of 20).[1] However, under the stress of continued shock, the urine may become isotonic with respect to serum, the sodium concentration may gradually climb (50-90 meq/L) and urea concentration fall to U/P of 5 or less. This can be taken as strong evidence of tubular damage.

Fig. (1) Acute Tubular Necrosis
High sodium 50-90 meq/L
Low urea U/P=5 or less
Low specific gravity (1010-1018)

Hemorrhagic Shock
Low sodium 0-20 meq/L
High urea U/P=20
High specific gravity (1020-1040)

It is characteristic of a normal kidney with reduced renal blood flow to produce a urine with a low sodium concentration (0-20

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*Conference held at Memorial Hospital, December 14, 1963.

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meq/L). This occurs not only in shock but is the basis for the Howard test for renal artery stenosis. Any pre-renal lesions that cause a decreased renal blood flow will also cause a decreased glomerular filtration rate per normal functioning nephron. Under such circumstances the phenomena of glomerular tublar imbalance are brought into play. The glomerulus filters a submaximal load of sodium and water to the proximal tubule, which now is able to re-absorb 98-100% of the filtered sodium and water. Normally, the proximal tubule can only re-absorb 85% of the filtered load. With virtually all the sodium and water having been re-absorbed proximally, the remaining sodium and water is easily re-absorbed distally and a small volume of concentrated urine low in sodium and high in urea is excreted. A therapeutic trial with an acute water load will not significantly increase urine output unless it first increases blood volume and renal blood flow.

Adequate Selective Sodium Reabsorption

If the glomerular filtration rate is reduced below a critical level long enough, the sodium load to the distal tubule will not be sufficient for adequate selective sodium re-absorption. This selective sodium re-absorption is necessary for the maintenance of hypertonicity in the interstitium of the renal medulla and is the basis of the counter-mechanism for the production of a concentrated urine. Theoretically then, the rare case may occur wherein the kidney may produce a urine with low sodium concentration but isotonic rather than hypertonic with respect to serum.

Conversely, a few cases have been reported (mostly in burns) of acute tubular necrosis with a low urine sodium concentration.[1]

Therefore, while helpful, a low urine sodium or osmolarity is not in itself diagnostic of either state. A urine that is hypertonic with a high urea concentration (U/=20) is strongly suggestive of an intact kidney, whereas the elevated urine sodium suggests acute tubular necrosis.

The renal sensitivity to acute tubular damaage in shock is enhanced by infection, anoxia, hemolysis, or other sources of pigments Vasopressor agents, such as Norepinephrine, will probably increase the likelihood of renal damage and should be avoided if possible.[6] Figure (2) lists the therapeutic armamentarium that might be helpful in preventing acute tubular damage.[2,3,4,5,6] All of these measures have proven to be helpful in the hands of various investigators.[7] However, only a few are readily available to the practicing surgeon, and more experience with the organic buffer compound, THAM, will be necessary before it can be considered a safe clinical tool. Low molecular weight dextran is not as yet available in most hospital pharmacies, but because it prevents sludging at the level of microcirculation, it is probably superior to the regular commercial dextran in preventing acute parenchymal necrosis. It must be remembered that where dextran has a very high oncotic activity and is therefore useful in maintaining blood volume acutely, it at the same time, has a rather low osmotic action and, therefore, is not to be considered an osmotic diuretic.[6]

Fig. (2) Methods of prevention of ATN in hemorrhagic shock

1. Mannitol infusion
2. Ganglionic blockade (Dibenzaline) (Arfanad)
3. Injection of renal pedical with Xylocaine
4. TRIS buffer (THAM) (Alkalinization and osmotic diuretic)
5. Low molecular weight—Dextran (Prevent sludging in microcirculation)

Mannitol As An Agent

Probably the safest, most effective and easily employed agent that has been shown to protect the oligemic kidney from acute tubular damage is mannitol.[2] By virtue of the fact that mannitol is extracellular, nonmetabolized, filtered but not re-absorbed, and has a very high osmotic activity, it has proven in the experimental animal to be of great value in preventing acute tubular necrosis in hemorrhagic shock or after a transfusion reaction. Theoretically, mannitol acts only as an osmotic diuretic and, therefore, its efficacy depends on glomerular filtration. There is now evidence that mannitol in some way increases the renal blood flow and glomerular filtration rate.[3] The mechanism by which mannitol accomplishes this increase in glomerular filtration and the significance of this action in the sparing of the kidney parenchyma from damage remains obscure. However, the physiological data to date would seem to indicate that mannitol either directly or indirectly causes a dilatation of the afferent artery to the glomerulus.

Once filtered through the glomerulus, mannitol exerts its effect by its high osmotic activity in retaining water and salt within the proximal tubular. Water and salt, therefore, are presented to the distal tubule in quantities that may exceed its resorptive capacity (approximately 15% of the normal glomerular filtration) and a diuresis occurs. Exactly how a rapid diuresis prevents damage to the tubule is still problematic and at present must be accepted as an empiric observation. However, it follows that once the kidney has shutdown, and the filtration rate is nil, mannitol will no longer be effective as a diuretic agent.

Because of its accessibility and complete lack of toxicity, mannitol is probably the drug of choice to prevent renal parenchemal damage in hemorrhagic shock.

In general, there are two uses for mannitol. One as a therapeutic trial and secondly, mannitol can be used prophylactically. For the purpose of a therapeutic trial, mannitol can be used to test the integrity of the renal tubule. A rapid infusion of a 20-25% solution (i.e. 50 gm. in 200-250 cc.) over a 10-30 minute period may be employed. A response in the form of an increased urine output should be noted in 30-60 minutes. It is important to realize that rapid infusion will cause a transitory but significant increase in plasma volume and should not be used in the face of congestive heart failure or in the hypervolemic patient. If a response is obtained, an infusion of mannitol should be continued prophylactically. If, however, there is no response, further administration of mannitol is useless and could be dangerous.

For the patient who has a high risk of acute parenchemal damage, mannitol may be employed prophylactically as a slow infusion when hemorrhage or a sudden drop in pressure is anticipated. An example might be a patient undergoing great vessel surgery such as repair of a ruptured aortic aneurysm or in the oliguric patient who has responded to a therapeutic trial of mannitol. As a rule of thumb, mannitol may be given prophylactically as a slow infusion of 5-10% in 2½% glucose and N/2 saline. The rate of infusion should be regulated to produce a urine of 30-50 cc. an hour. Care should be taken first to establish that the patient has adequate renal function and, therefore, that mannitol will be effective.

A word of caution is in order. With the use of prophylactic mannitol, urine volume no longer reflects glomerular filtration rate in the usual sense. Therefore, urine volume should not be used as an indicator of adequate renal perfusion or of the effectiveness of systemic blood pressure.

Although it is easy to demonstrate the efficacy of mannitol for the prevention of acute tubular necrosis in the laboratory animal, at a clinical level this is more difficult because the volume of patients necessary for a double blind study is prohibitive. Recently, data have become available from some of the larger clinical centers demonstrating that since the routine use of mannitol, the incidence of acute tubular necrosis in the high risk patients has dropped considerably.[2] It seems reasonable to believe that in the near future more evidence supporting this work will be forthcoming from other clinical centers. At the present time, there is sufficient evidence to recommend that mannitol be used as one of the first orders of therapy in the treatment of patients with acute hemorrhagic shock or transfusion reaction.

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THE NEPHROTIC SYNDROME DURING PREGNANCY

● Although this is a rare event, the author presents a clinico-pathological study to show the importance of histological diagnosis in the classification of the disease process and the proper selection of patients for steroid therapy. The lack of untoward effects of steroids on both mother and fetus is noted. Emphasis is placed on continued follow-up of the patient, reinstating therapy if protienuria reoccurs.

Charles Riegel, M.D.

The nephrotic syndrome has been described as a complex of various clinical and laboratory findings including marked edema, massive proteinuria, hyperlipemia and hypoproteinmia. It may occur with a number of various disease entities including diabetes, lupus, syphilis, renal amyloidosis and heavy metal poisoning. It has also occurred with renal vein thrombosis. The nephrotic syndrome more commonly occurs as a sequela to acute glomerulonephritis or as idiopathic nephrotic syndrome. The latter probably develops as a result of an antigen antibody reaction in the glomerular capillary tufts to various stimuli. The following case report is concerned with the incidence of the nephrotic syndrome occurring during pregnancy.

Case Report

A 20 year old Negro woman was initially seen during her 31st week of gestation. It was noted that she had dependent edema and a blood pressure of 130/90. A urinalysis showed 3+ albumin and occasional WBC's. The patient was placed on 500 mgm. of Chlorthiazide twice a day. The following week, she was admitted to the hospital when there was no appreciable change in her condition. Past history revealed that the patient had been hospitalized in a neighboring state six months before because of "burning on urination." A diagnosis of cystitis was made at that time and the patient was treated with Sulfisoxazole for a period of ten days.

The patient remained at the Delaware Hospital for four days. With bed rest and diurectic therapy, she appeared to lose her edema and was returned to a local institution for expectant mothers where she remained at bed rest. For the next month, she continued to have albuminuria and recurrence of edema. A number of urine cultures were reported as being negative. Laboratory studies done at this time showed a creatinine of 1.2 mgm.%, cholesterol of 303 mgm.%, total serum protein of 5.7 with an albumin of 2.8 and globulin of 2.9. An ASLO titer was reported as negative. A 24 hour urine collection revealed 19.04 gms. of protein.

When the patient was subsequently readmitted to the hospital, one month after the previous discharge, she again showed a rather marked dependent edema and 4+ albuminuria. She was mildly hypertensive. Her BUN ranged from 19-25 mgm.%, cholesterol of 374 mgm.% and there was a drop in the serum protein of 4.0 grs. with an albumin of 1.6. A second 24 hour urine collection showed a protein of 20.9 gms. A hormone assay done on a 24 hour urine specimen showed a ketosteroid of 14.7 and a corticoid level of 2.3. Eight days after admission, on 7-18-63, the patient delivered spontaneously a 4 lbs. 5½ ozs. male infant. A second hormone assay collected five days post-partum showed a cor-

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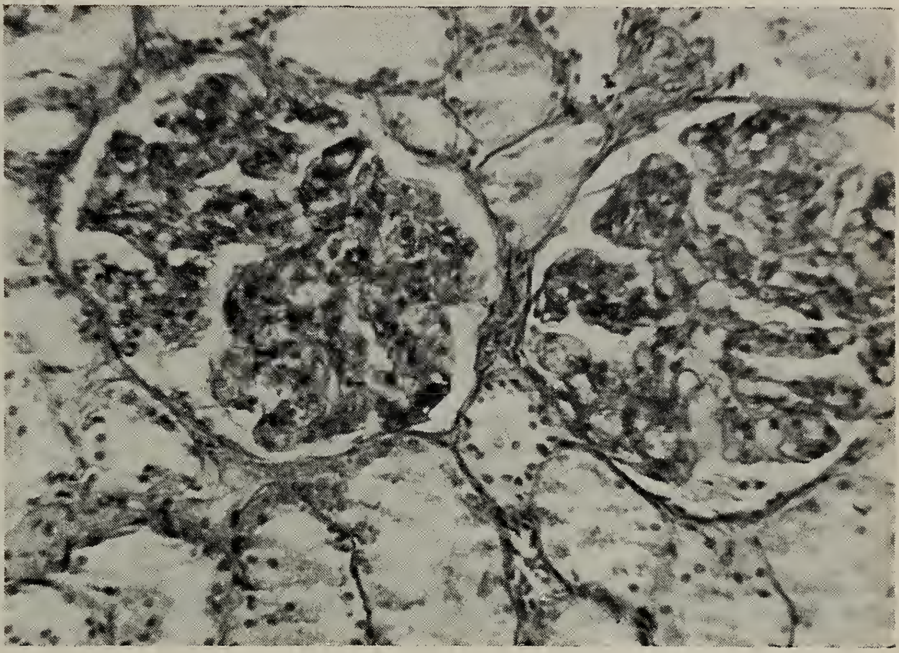
Figure 1
Case Presented



Renal biopsy was reported as showing diffuse membrane thickening and hypercellularity with occasional capsular adhesions consistent with a diagnosis of chronic membranous and proliferative glomerulonephritis.

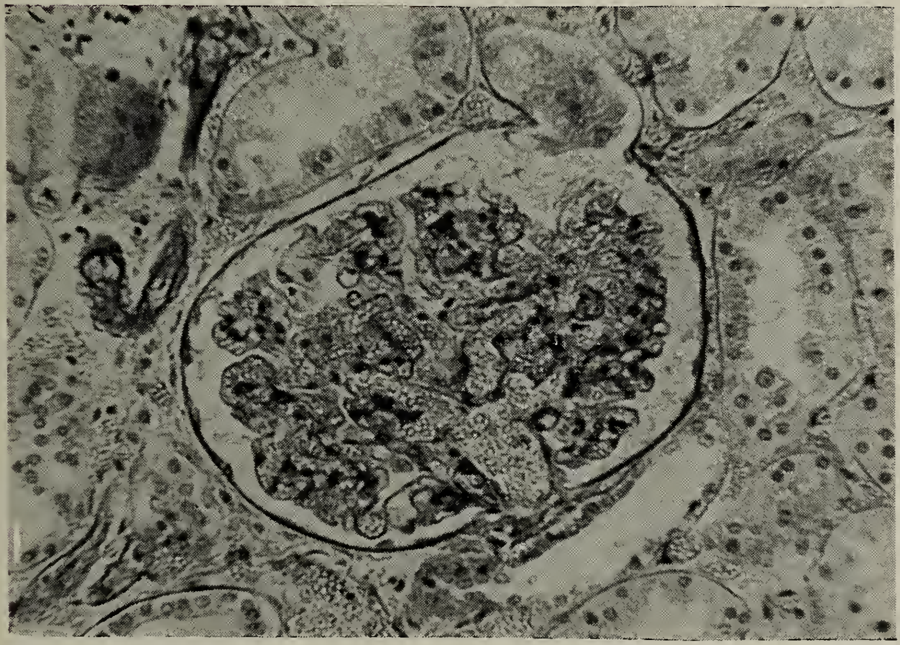


Figure 2
Normal Kidney

ticoid of 1.0 mgm. The following day, the patient was started on Prednisone, 60 mgms. per day in divided doses. Two weeks later, her edema had cleared but the urinalysis was reported as 2+ albumin. Approximately one month after discharge, the Prednisone was dropped to 40 mgm. per day. At that time, the patient's albuminuria had cleared. The following month the dose was dropped to 40 mgms. of Prednisone every other day. The patient was hospitalized on 11-2-63, and a renal biopsy was performed. This biopsy was reported as showing diffuse membrane thickening and hypercellularity with occasional capsular adhesions consistent with diagnosis of chronic membranous and proliferative glomerulonephritis, Figure I. During this hospitalization, laboratory studies revealed a BUN of 11, cholesterol of 166, total protein of 6.2 with an albumin of 3.4. The patient continued her Prednisone on an every other day basis for another full month and then during the subsequent months the dose was gradually decreased and finally stopped. The patient has continued to remain free of edema and albuminuria.

Discussion

The nephrotic syndrome is of considerable importance to the obstetrician because the clinical features presented by the patient can easily be confused with the more common state of pre-eclampsia. In a few cases, severe underlying renal disease may be adversely affected by the pregnancy.[4] It has also been noted that the patient with the nephrotic syndrome during pregnancy is more susceptible to both infection and thromboembolic disease.

The incidence of the nephrotic syndrome during pregnancy has been rare. Stander & Kuder[12] described several cases of pregnancy complicated by the nephrotic stage of chronic glomerulonephritis in 1934. They stated that the maternal mortality was 40% within 10 years after the diagnosis of the nephrotic stage was made. Because of a high fetal mortality of 21%, they recommended therapeutic abortion with nonviable babies and cesarean section if the fetus was viable. After Wegner[13] reported three cases out of 12,000 deliveries in 1937, Seftel and Schewitz[1] described 7 patients and later 7 others with renal biopsy studies. Tillman[3] discussed 14 cases in his discussion of the Classification of Toxemia Pregnancy in 1961. Three cases of the nephrotic syndrome were encountered among almost 25,000 pregnancies at the Stanford University Hospital from 1946 to 1959. In general, the incidence of the nephrotic syndrome during pregnancy has varied, from 0.025 to 0.050%.

It is important to review the various histological abnormalities found in the kidney of a patient with the nephrotic syndrome. This can help us to understand success or failure of therapy in the individual patient. Burch, Pearl and Sternburg[11] established a pathological classification studying renal biopsies of 33 patients with the nephrotic syndrome. (Table I)

TABLE I

1. Membranous glomerulonephritis — 10 paients
2. Prolifierative glomerulonephritis — 5
3. Membranous and proliferative glomerulonephritis — 6
4. Chronic sclerosing glomerulonephritis — 6
5. Indeterminant group — 6

Total number of patients — 33

In patients with membranous glomerulonephritis, the biopsy showed the basement membrane to have a diffuse thickening with the glomeruli of normal cellularity. A proliferative glomerulonephritis will show the glomeruli to be hypercellular with the glomerular basement membrane being thin and normal in appearance. The third group shows a combination of hypercellular and basement membrane thickening. The biopsy showing a sclerosing glomerulonephritis reveals partial or complete obliteration of glomeruli, in addition to interstitial fibrosis and tubular atrophy. The indeterminant group will show minimal evidence of either basement membrane thickening or proliferative changes or a combination of both disease processes. Regardless of the specific histology present, the abnormal glomerulus will leak protein in abnormally high concentration and produce the clinical syndrome of nephrosis. '

Patients who have the nephrotic syndrome, particularly those who have the histological types proven more amenable to therapy, (i.e. patients with normal renal function and minimal glomerular changes, indeterminant type or proliferative glomerulonephritis), can be treated and pregnancy should not deter therapy with corticosteroids. Previously, there had been some controversy over the question of complications created during gestation by steroid administration. Some authors have described the salt retaining properties of steroids as a hazard and some have suggested that toxemia would result. In 1951, Karnofsky[14] cited corticosteroids as the inciting agents responsible for the development for certain fetal abnormalities. In 1953, Margules and Hodgkinson[6] reported on 28 patients who received varying doses of either ACTH or cortisone during or before pregnancy without incurring any major deleterious effect, either in the mother or in the infant. He quoted one case in which the mother received 5010 mgm. of Cortisone during pregnancy. Her baby was lethargic and somewhat cyanotic for the first 72 hours but recovery was spontaneous with the child developing normally thereafter. The absence of any evidence of maternal or fetal abnormalities reported in recent years could possibly be explained by the use of the newer steroid analogues and because of the frequent use of intermittent dosage.

There has been some discussion centered around the documented increase of endogenous steroid during pregnancy and whether or not this alone may cause some of the spontaneous remissions reported during pregnancy. In 1961, Peters[7] reported on a patient who developed proteinuria in the 3rd month of pregnancy within one week after steroid maintenance therapy was stopped. This proteinuria cleared spontaneously within one month and the patient had an uneventful course of pregnancy. Paschkin[15] stated that in many animal species the adrenal glands hypertrophy during pregnancy and Eastman[16] also noted that the anterior lobe of the pituitary hypertrophies during pregnancy and returns to normal size in the postpartum period. In these cases the levels of urinary corticoids are elevated during pregnancy. Seftel[1] stated that in the patient who in a mild and initial state of nephrosis, this state could possibly be improved by the increase of endogenous steroids during pregnancy. If the disease is moderately advanced, such an increase would probably be insufficient to produce a remission. In the case presented, certainly there was neither an increase of urinary corticoids nor was there any evidence of remission of the nephrotic state until after exogenous steroids were administered.

Several different schedules for the administration of steroids and various time intervals for the duration of therapy are proposed. Most authors[8,9] have suggested that Prednisone be given in an initial dose of 60 mgm. per day in divided doses. Chinard[8] has suggested that this schedule be maintained for 28 days before a reduction in dose, whether or not diuresis has been achieved. The criteria for reducing steroid dosage is the absence of proteinuria, and steroid levels should probably be maintained at a relatively high rate until two weeks after the patient is free of albuminuria. Diuresis alone should not be used as a signal to decrease or stop steroid therapy. After the initial several weeks of steroid therapy or until the proteinuria disappears, the patient should probably be placed on an alternating day regimen. Most authors[9,10] have suggested that intermittent steroid dosage, either given three times a week or every other day affords a definite reduction in the amount and severity of steroid complications and that there is little sacrifice in the desired anti-inflammatory response with this dosage schedule. A number of investigators have disagreed on the amount of time that the patient should remain on steroids, the time interval ranging from several months to a full year. The response to treatment should be judged by quantitative determinations of 24 hour urinary excretion of protein. If an increase in urinary protein is noted during treatment with the maintenance dose, the dose should be increased.

If a patient responds to steroid therapy, either partially or completely, and then proteinuria reappears some time after steroids have been stopped, it is likely that this patient will have a second remission if therapy is reinstituted.

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(*References continued on Page 159*)

CORRECTION OF BILIARY OBSTRUCTION USING A NOVEL POLYTETRAFLUOROETHYLENE ARTIFICIAL BILE DUCT

● The use of newer plastic materials of proven safety and reliability has been extended to solve a functional problem in biliary obstruction. This required the combined skills of the surgeon and a material scientist teamed to design a functional duct with demanding requirements of patency to bile flow along with protection against reflux of undesirable residues.

Joseph F. Hughes, M.D.
John F. Lontz, Ph.D.

The alleviation of congenital and degradative biliary obstruction has posed some vexing problems that have been solved only partly through corrective surgery largely because of the lack of plastic materials capable of withstanding the chemical action and functional stresses of the biliary components, on the one hand, and avoiding deleterious tissue reaction on the other. Since the early recognition of biliary atresia in infants by Thomas[1] in 1892, several notable milestones in correcting the deteriorative conditions can be singled out. Surgical anastomosis between a tractable segment and the intestinal tract was suggested by Holmes[2] when the absence of bile duct drainage is the only major defect in the congenital cases. The first successful restitution of the biliary enteric continuity was subsequently accomplished by Ladd.[3]

More recently, surgical correction with artificial ducts was approached by Sterling[4] who reported significant success among some 57 infants in whom an internal fistula was created. The longest patency was reported with a child, 4 months old, that had an artificial bile duct inserted to create both hepatocholecystic and external fistulae which were still draining bile as the child reached nearly 5 years of age, and still functioning at the time of the report. Sterling[5] also conducted extensive studies on different types of artificial ducts involving various mechanical construction of metals and plastics that included silver, stainless steel, Vitallium, rubber, polyethylene, nylon, "Dacron" polyester tubing and "Teflon" coating on silver cannulae. Of these, silver, nylon, and "Teflon" appeared most effective for use as artificial bile ducts, but improvements were needed in design and construction in order to drain a larger liver volume and to decrease tissue reaction. The devices reported by Sterling for the most part were rigid, inflexible constructions into which ordinary perforations or holes were put but lacked provisions for preventing or reducing reflux or back flow of the bile into the liver.

In recent years the increasing availability of chemically resistant silicone elastomer and polytetrafluoroethylene resin in prosthetic applications has stimulated their adaption in various types of restorative and corrective surgery.[6] Favorable results, for instance, with silicone T-tubes as extrahepatic ducts in reconstructive biliary surgery have been reported by Sanislow and Zuidema[7] based on animal tests and incubation in human bile.

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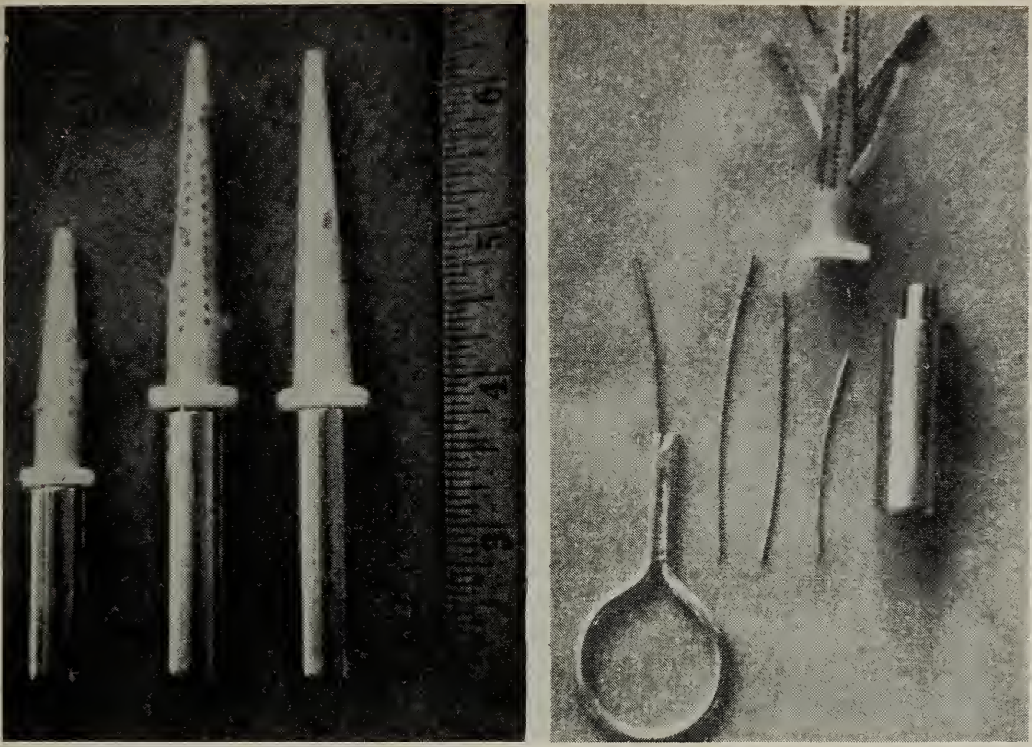

Figure 1
Sterling (4) nylon biliary tree.

(a) Molded nylon trees with multiple drainage holes and tips of plastic branches seen along shaft. Steel handle is removed after cone is inserted into liver.
(b) Biliary tree with branches extended through the nylon cone. Stylets have been removed from branches. Inserting tool with ring handle has one stylet.

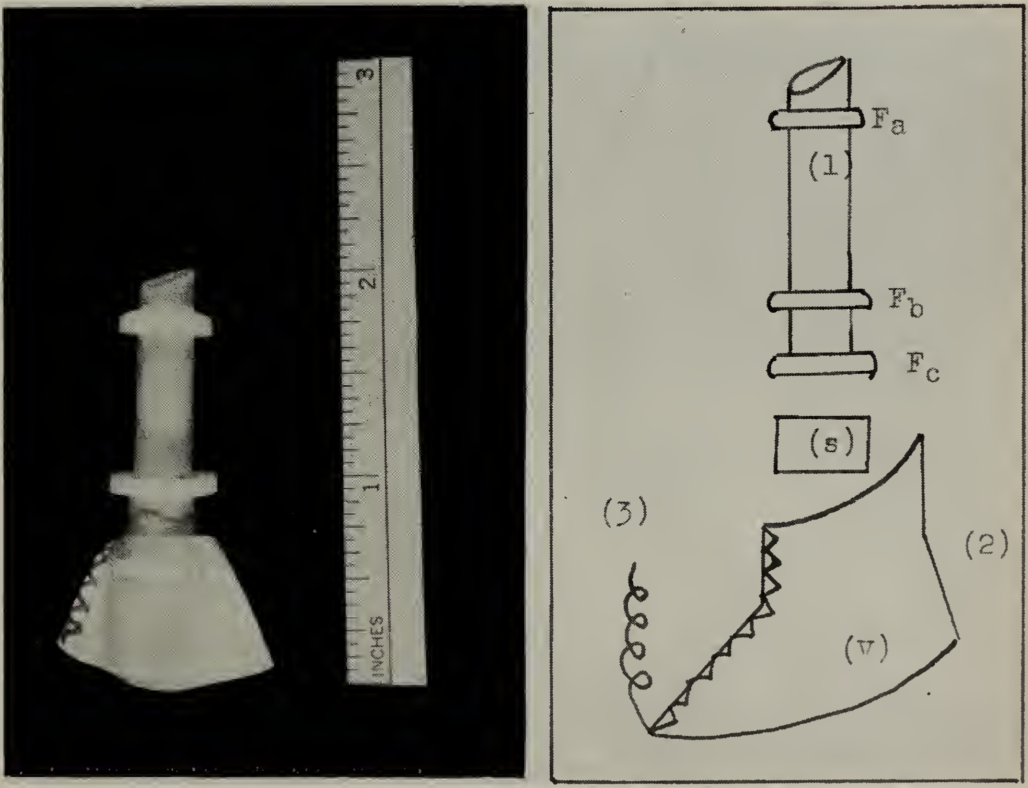

Figure 2
Artificial bile duct of polytetrafluoroethylene

(a) Photograph showing flanged tube with distal closure valve made from soft, porous sheeting of polytetrafluoroethylene.
(b) Component parts including (1) machined solid duct with retaining flanges (Fa, Fb and Fc), porous, soft sheeting pre-cut to a flap valve (V) sewn with (3) polytetrafluoroethylene thread and secured with heat-shrunk cuff.

A similar surgical insertion is reported in the present case described in the ensuing discussion. While the silicone T-tube indicated a marked improvement over conventional rubber T-tubes which consistently became partially occluded with deposits of bile salts, the extrapolated *in vitro* human bile incubation tests tended to indicate only about a three year durability based on the decreasing tensile strength and tensile elongation. For the present patient case requiring an urgent correction of biliary obstruction after five repeated failures, a compelling choice was made for an all-polytetrafluoroethylene artificial duct for a more permanent insertion.

The fluorocarbon resin was chosen as the principal material of construction in order to avoid or minimize such incompatabilities that might arise when two dissimilar materials, with possibly different biophysical characteristics, are used. Moreover, the biological benignity of polytetrafluoroethylene in the blood stream as evidenced by the successful use of the Starr-Edwards heart valve[8] and in subcutaneous tissues as, for instance, a prosthetic implant for reconstruction of the chin,[9] just to cite typical examples, prompted the selection of the more chemically resistant fluorocarbon[10] in preference to the silicone polymer.[11]

Construction And Design Of Artificial Duct

Following a detailed consideration of the hepatic drainage into the gastro-intestinal tract, a number of duct designs were developed and assessed with simple *in vitro* flow tests using simulated bile fluid. Principal modification was directed toward adapting a non-refluxing fistula, starting from the functional drainage establised by means of the Sterling plastic tree shown in Figure 1. Since the Sterling duct has shown success in correcting biliary atresia in infants, it was a logical choice for the modifications. First, it was decided to include flanged ends to restrict motion or dislodgement and secondly to augment the distal end with a flexible valve or flap to prevent or minimize the back flow of the gastrointestinal fluid, often loaded with bacteria that could be infective to the liver. These specifications or requirements have been demanded for the particular case reported in detail in this paper. Figure 2 shows the actual photograph and a schematic design chosen from a number of candidates.

The new duct consists of a solid cannula (C) made from a molded stock of "Teflon"* with a 0.25 inch (6.35mm.) internal diameter and a 0.060 inch (1.52mm.) wall and with three integral walls flanges (F). The upper single flange (Fa)) is available for insertion and fixation inside the liver. The middle flange (Fb) is for fixation by suture to the liver capsule. The lowermost flange (Fc) serves to secure the valve or flap (V) so that it does not slip up and down the cannula. The valve (V) is sewn by means of a thread made from "Teflon" filament and doubly secured over the cannula by means of a heat shrinkable sleeve (S) made from a fluorocarbon resin.

The unique feature of the valve (V) is its soft, flexible quality with a stiffness modulus approximating that of the physiological duct. It is also fabricated from polytetrafluorothylene in the form of porous sheeting, 0.012 inch (0.3mm.) thick. It is predominantly an open pore structure with pores in the range of 0.3 microns so chosen as to assure constant wetting inside the jejunum so that the bile residue has access to the chyme through capillarity. The porosity is selected also to serve as a filtering barrier to prevent sedimentous solids from drifting back into the liver. The critical porosity has yet to be determined but the present level may indeed be more than adequate.

In order to construct the complete artificial duct exclusively with the polytatrafluoroethylene resin, in contrast to the use of two different materials such as polytetrafluoroethylene and silicone as is commonly done in heart valves,[8] various types of the TFE and FEP fluorocarbon materials were involved as listed in Table 1 along with tensile modulus which provides a measure of stiffness or flexibility.

Additional modifications are now being made to provide for an increasing variety of

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*Registered DuPont trademark for its fluorocarbon resins.

TABLE 1

Polytetrafluoroethylene Materials Used

Type	*Tensile modulus lb. sq. in. (a)*
(1) TFE Solid, machined stock (b)	74,000
(2) FEP sleeve, heat-shrinkable (c)	96,000
(3) TFE porous sheeting (d)	6,000
(4) TFE thread #528 (e)	140,000

(a) Based on A.S.T.M. test method D-1457-62T.
(b) Designed by Kumlon Crafts, Arden, Del.
(c) A copolymer resin of tetrafluoroethylene and hexafluotoropropylene, in fabricated form furnished by Pennsylvania Fluorocarbon Co., Malvern, Pennsylvania.
(d) An experimental physical variation of TFE resin.
(e) Gudebrod Brothers Company, Philadelphia, Penna.

surgical procedures, more or less custom made to specific corrections of the biliary obstruction or defect. Various modifications of the porous flexible valve (V) are being investigated with adjustments for maximum and minimum refluxing or closure pressure, ranging from 30 to 300 mm. mercury static head.

The entire artificial duct was digested 6 to 8 hours in percolating (90-95°C.) aqua regia (4 parts of concentrated hydrochloric acid and 1 part concentrated nitric acid, as shown in Figure 3), and then boiled 2 hours in four changes of distilled water. The unusual rigorous chemical treatment was intended to destroy incident organic matter and any contained trace of elements by the exhaustive digestions. Following this treatment, the artificial duct was stored in 1:500 solution of Zephiran. Prior to surgery it was intended to destroy incident organic matter and any contained trace of elements by the exhaustive digestions. Following this treatment, the artificial duct was stored in 1:500 solution of Zephiran. Prior to surgery it was rinsed in several liberal changes of normal saline and autoclaved 40 minutes at 250° F. There were no dimensional changes or disruption of the sewn valve following this schedule and the duct was ready for surgical implantation.

Figure 3
Digestion with aqua regia. (Nitric acid and hydrochloric acid mixture)

Case Presentation

On March 23, 1962, a 34-year old woman, 67 inches in height, weighing 156 pounds, mother of 4 children had an elective cholecystectomy for chronic cholecystitis with cholelithiasis. During the postoperative period the patient developel obstructive jaundice with an external biliary fistula which drained for two days. The jaundice increased in depth and the patient was transferred to the care of a New England clinic (NEC).

On admission she was moderately jaundiced and showed evidence of a well-healed, right subcostal incisional wound. Laboratory tests shown in Table 2, revealed that she was moderately anemic. She required preoperative transfusions.

On April 9, 1962, the patient was subjected to exploratory surgery which revealed a defect in the common bile duct extending from the proximal common hepatic duct to the distal common bile duct. Accordingly, a

TABLE 2

Summary of Clinical Chemistry, April 3, 1962

Analysis	*Level*
Hemoglobin	10 grams per 100ml of blood
Total bilirubin	8.7 mg. per 100ml. of blood
Alkaline phosphatase	15.5 B.U.
Total protein	6.2 grams per 100ml. of blood
A/G ration	0.88
Prothrombin time	76 percent

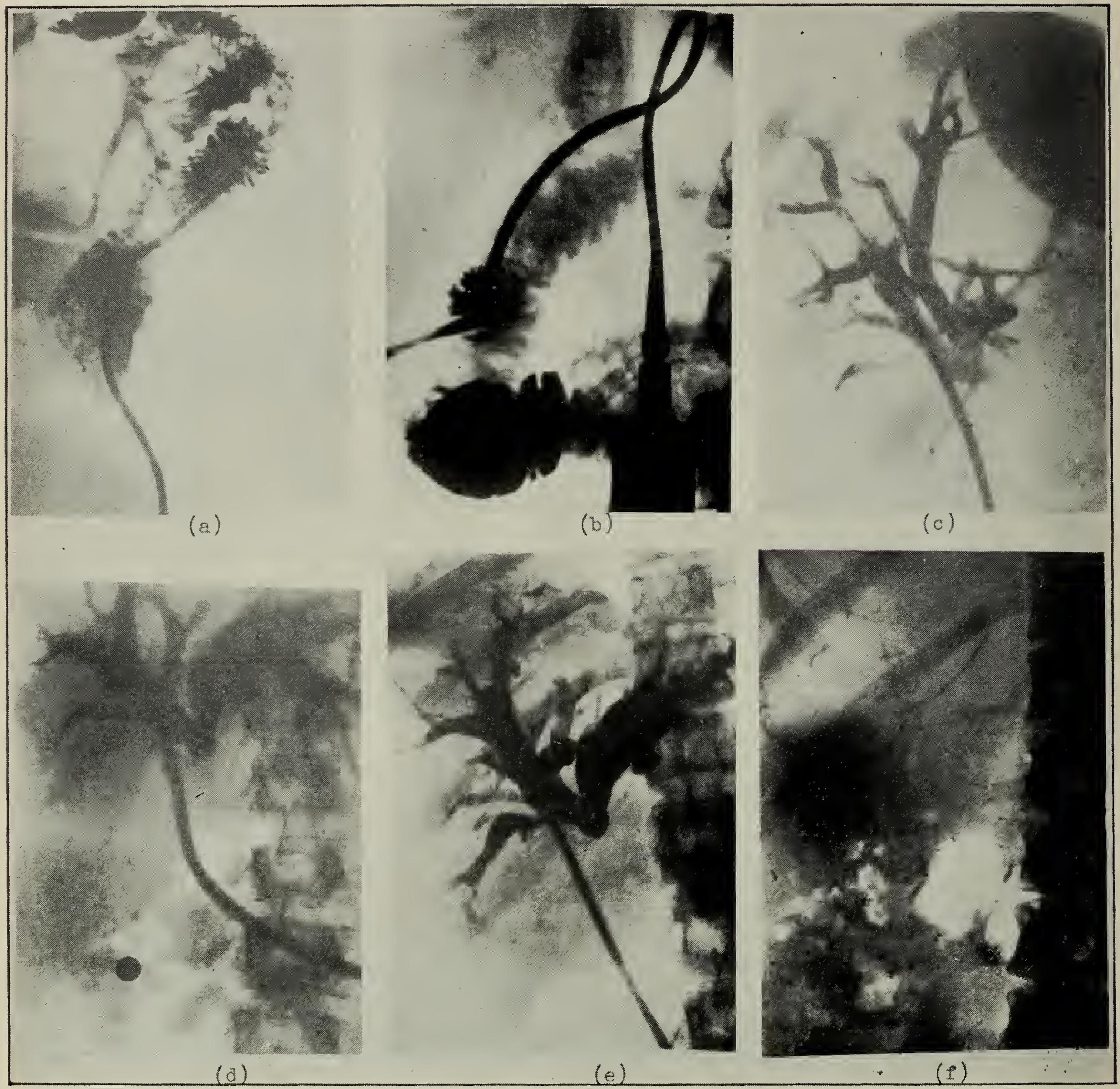

Figure 4. X-ray photograph of various surgical insertions.

(a) Rubber T-tube (C) cholangiogram (February 1, 1963). Upper limb is occluded. No dye passes into the hepatic duct.

(b) Rubber T-tube (D) cholangiogram (May 29, 1963). Limb going into the tube is occluded. Hepatic ducts are not visualized.

(c) Silicon tube (E) operative cholangiogram (July 19, 1963). The silicone tube is in the right hepatic duct. Ducts are greatly dilated. Proximal hepatic common duct is seen.

(d) Silicone tube (E) post-operative cholangiogram (July 31, 1963). Decreased distension of hepatic ducts noted.

(e) Operative cholangiogram (October 16, 1963), Hepatic ducts are greatly distended.

(f) Polytetrafluoroethylene artificial bile duct (F), supine anterior-posterior view of upper right abdomen showing conduit in place (December 2, 1963), 47 days later.

hepaticojejunostomy, using a surgical grade rubber T-tube (A), was performed with a distal jejunojejunostomy. Following this procedure, the patient showed satisfactory, immediate convalescence apart from a mild wound infection which was under control at the time of her discharge. She was discharged, instructed to take multivitamins three times a day, and put on a high-carbohydrate, high protein, 85 gram fat diet.

On July 7, 1962, the patient was again admitted to the New England clinic with a preoperative diagnosis of stenosis of the hepaticojejunostomy. At operation it was found that the jejunum was still attached to the region of the common hepatic duct; but when this was removed, a tight stenosis had occurred at the site of union. The original rubber T-tube (A), which had been placed through the anastomosis, was lying free in the jejunum below the previous anastomosis. The stricture was dilated. A second T-tube (B), was inserted at the hepaticojejunostomy anastomosis.

On November 15, 1962, the patient again developed jaundice and was readmitted to the New England clinic. At operation, the findings disclosed obstruction of the T-tube (B) in the hepaticojejunostomy. The right hepatic duct was dilated up to the diameter of a #18 Bakes dilator, while the left hepatic duct was dilated to the size of a #5 Bakes dilator. Both ducts were flushed out with saline solution. A third #18 French rubber T-tube (C) was then placed with one arm extending into the right hepatic duct and the other short arm was placed in the loop of the jejunum. The long arm of the rubber T-tube was brought out through an opening in the jejunum and then out through the wound. Later an x-ray cholangiogram, taken on February 1, 1963 and shown in Figure 4a, indicated the rubber T-tube (C) to be noticeably occluded.

On March 30, 1963, the patient was admitted to the New England clinic with a preoperative diagnosis of stricture of hepaticojejunostomy. At operation on April 7, 1963, a revision of the stricture of the hepaticojejunostomy was performed with the insertion of a fourth, #14 French rubber T-tube (D). One of the short limbs was placed in the right hepatic duct and the other into the jejunum, while the long limb was brought out through the stab wound in the abdomen. The patient was discharged with temporary relief of her jaundice. However, during convalescence another disappointing recurrence of the biliary obstruction became evident. An x-ray study taken on May 29, 1963, showed in Figure 4b, again indicated occlusion of the rubber T-tube.

In June, 1963, the patient developed jaundice and fever, a further evidence of obstructive cholangitis. On removal of the fourth rubber T-tube (D), it was found that the limb going into the right hepatic duct was completely occluded with biliary sediment. Physical examination of the rubber tubing showed marked discoloration along with accelerated ageing characteristics, notably increase in tensile modulus and decreased tensile elongation to break, compared to a fresh sample of preserved rubber tubing of equivalent construction. The removal of the fourth rubber T-tube (D) did not relieve the patient's symptoms. The patient began having repeated attacks of cholangitis with jaundice. The alkaline phosphatase was 40 Bodansky units. She was advised to return to the New England clinic but strongly disinclined to the repeated adventure.

On July 19, 1963, the patient assured of a more durable elastomeric duct, was operated on at the Wilmington General Hospital (WGH), at which occasion the hepaticojejunostomy anastomotic site was exposed and found to be heavily occluded. The stricture was dilated to 6 mm. and a fifth, silicone tube (E) one-quarter inch in diameter was inserted through the fistulous tract. The ductal system was flushed out with saline, yielding considerable amount of green biliary mud. The silicone tube was inserted in the right hepatic duct and an operative cholangiogram, Figure 4c, was taken. This revealed that both the left and right hepatic ducts were greatly dilated, confluent, and free of calculi. The distal end of the silicone tube was threaded through the jejunum and

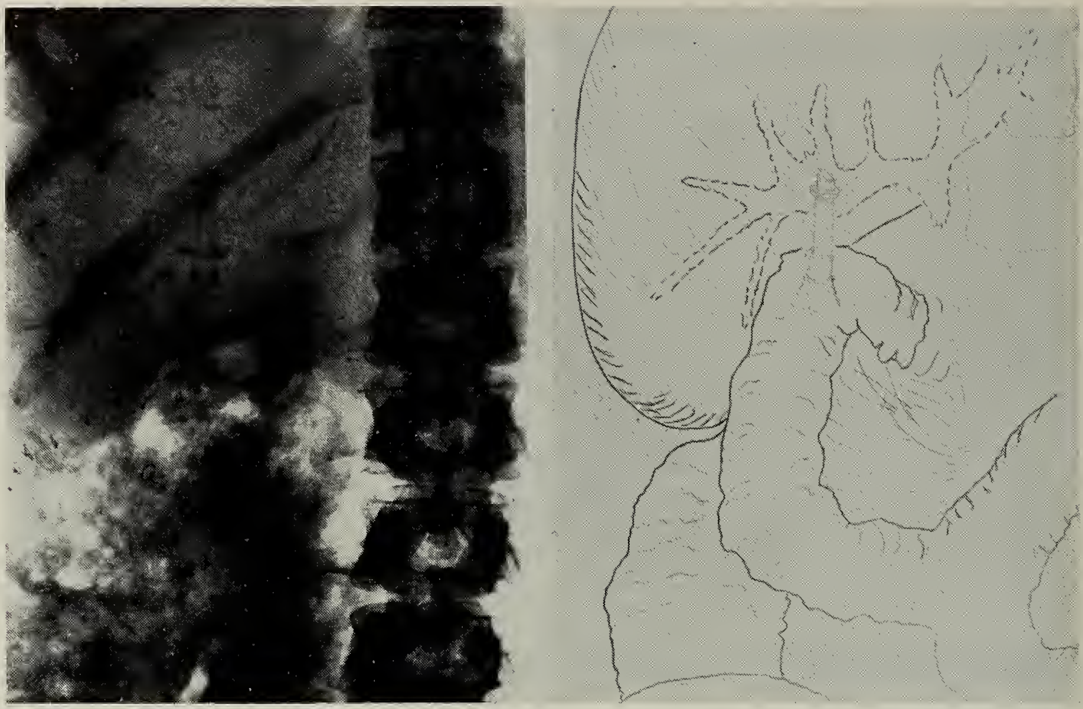

Figure 5. X-ray photograph (March 17, 1964), or 157 days later, and diagram location of the polytetrafluoroethylene artificial bile duct emplaced in the hepaticojejunostomy.

through a small stab wound in the anterior abdominal wall attached to the jejunum. Also before closing the abdomen another entero-enterostomy was performed below the site of the previous one and a Roux-Y limb of jejunum was formed; this started at the site of the hepaticojejunostomy.

The patient did well after this procedure. The bile could be measured. The patient passed about 500 cc. of bile daily. During the operation a silicone tube had been put through a temporary gastrostomy and after normal alimentation began, both tubes were united. The bile would run from the liver through one silicone tube into the other and flow into the stomach. On July 31, 1963, a postoperative cholangiogram, shown in Figure 4d revealed less distension of hepatic ducts. The silicone tube (D) functioned well until about three months after the operation when this tube slipped out of the right hepatic duct. The site of the anastomosis began to stricture and the patient had a recurrence of the jaundice with cholangitis. The patient was again admitted to the hospital and this time a new approach had to be taken to stop the vicious cycle of repeated operations. A more permanent duct had to be devised, one that could be relied upon for permanent fixation and assure durability against a host of the chemical reactions performed by the liver, namely; oxidation, methylation, acetylation, esterification, and conjugation with detoxifying entities if one were to attain reliably complete chemical resistance.

On October 16, 1963, the patient was operated on at the Wilmington General Hospital. At the site of the anastomosis, a stricture was again found. The stricture was about two to three mm. in diameter and was blocked with a dark green sediment. The opening was dilated up to twelve mm. and a cholangiogram (shown in Figure 4e) was taken. This cholangiogram again showed a marked dilatation of the right hepatic and left hepatic duct radicals. The hepatic ducts were flushed out well with isotonic saline solution. The polytetrafluoroethylene conduit (described in Figure 2) was then placed in the opening. The inner flange was inserted inside the right hepatic duct and the middle flange was sutured to the liver capsule with #32 stainless steel wire. The flutter valve was in the lumen of the jejunum. The jejunum was then closed around the polytetrafluoroethylene prothesis and attached to the liver capsule with silk sutures. After this operation, the patient did amazingly well.

An x-ray taken on December 2, 1963, (Figure 4f) indicated the polytetrafluoroethylene duct to be in the same position as was inserted during the operation. There was no return of jaundice and patient has been improving steadily since the procedure. The alkaline phosphatase taken on January 21, 1964, was 21.2 Bodansky units, an indication of temporary obstruction. This was relieved because in a test on January 28 the lowered level of 8.0 was obtained. The patient on examination showed none of the usual symptoms of biliary obstruction. Another x-ray examination was taken on March 17, 1964, shown in Figure 5 along with a schematic drawing of the artificial duct as was installed at the operation with no evidence of any lateral or vertical displacement. The patient gained 10 pounds and was able to eat unrestrictedly. She has since undertaken a proprietary mode of diet control and has expressed a desire to take a part time job, a rather dramatic demonstration of change from an indisposed attitude during the previous surgical adventures.

Clinical Chemistry And Surveillance

The patient has been under constant surveillance during and following the surgical episodes with emphasis on chemistry changes such as normally required for biliary correction. Figure 6 summarizes a select, partial, series of the some 14 different clinical tests, too numerous to detail here, while Figure 7 illustrates the concurrent surveillance based on electrophoretic analyses.

Of particular significance is the marked lowering of the alkaline phosphatase and bilirubin which appeared to have reached critical levels from the third to the fifth surgical insertions with the elastomeric biliary tubing. Since the insertion of the polytetrafluoroethylene artificial duct on October 16, 1963, the alkaline phosphatase appears to level out at a normal of 8 Bodansky units while the bilirubin has attained the assuring level of 0.72 mgs. per 100 ml. of blood. The white blood count, which at one time (3-17-63) attained an alarming critical level, has showed a trend to normal.

Electrophoretic analyses are summarized in Figure 7. During the period prior to the insertion of the polytetrafluoroethylene conduit they have indicated generally low total protein values A/G ratio, albumen, and moderately high alpha-1-globulin, except for the one profile obtained on 7-19-63 just after the insertion of the silicone tube (D). Following the insertion of the polytetrafluoroethylene duct, there appeared to be no abnormal changes or trends in the profile from normal. Surveillance is being continued hopefully for at least one year to ascertain any modifications coincidental to the new artificial bile duct.

The most recent electrophoretic profile illustrates a substantially complete return to normal and gives assurance for a reliabale permanent insertion.

Conclusion

The continual and repeated use of rubber and similar substances in this particular patient proved to be highly unsatisfactory for producing adequate drainage of the biliary ducts. It is our considered opinion that when two different types of mucous membranes are anastomosed, a stricture is prone to result and it is usually necessary to insert an *inert* permanent prothesis at the site of the union to prevent recurrence. The stricture does not recur anywhere along the normal duct and will only occur at the site of the anastomosis. If the prothetic appliance can be put in at this area the individual should get permanent relief. Another factor of importance is the ability to remove the bile from the liver and not have a reflux of intestinal contents back into the biliary passage to produce cholangitis. If cholangitis is produced, the patient can quickly develop a bactermia. It is impossible to keep the contents of the bowel sterile for a prolonged time. The solution in this case was to have a satisfactory Roux-Y limb of the jejunum

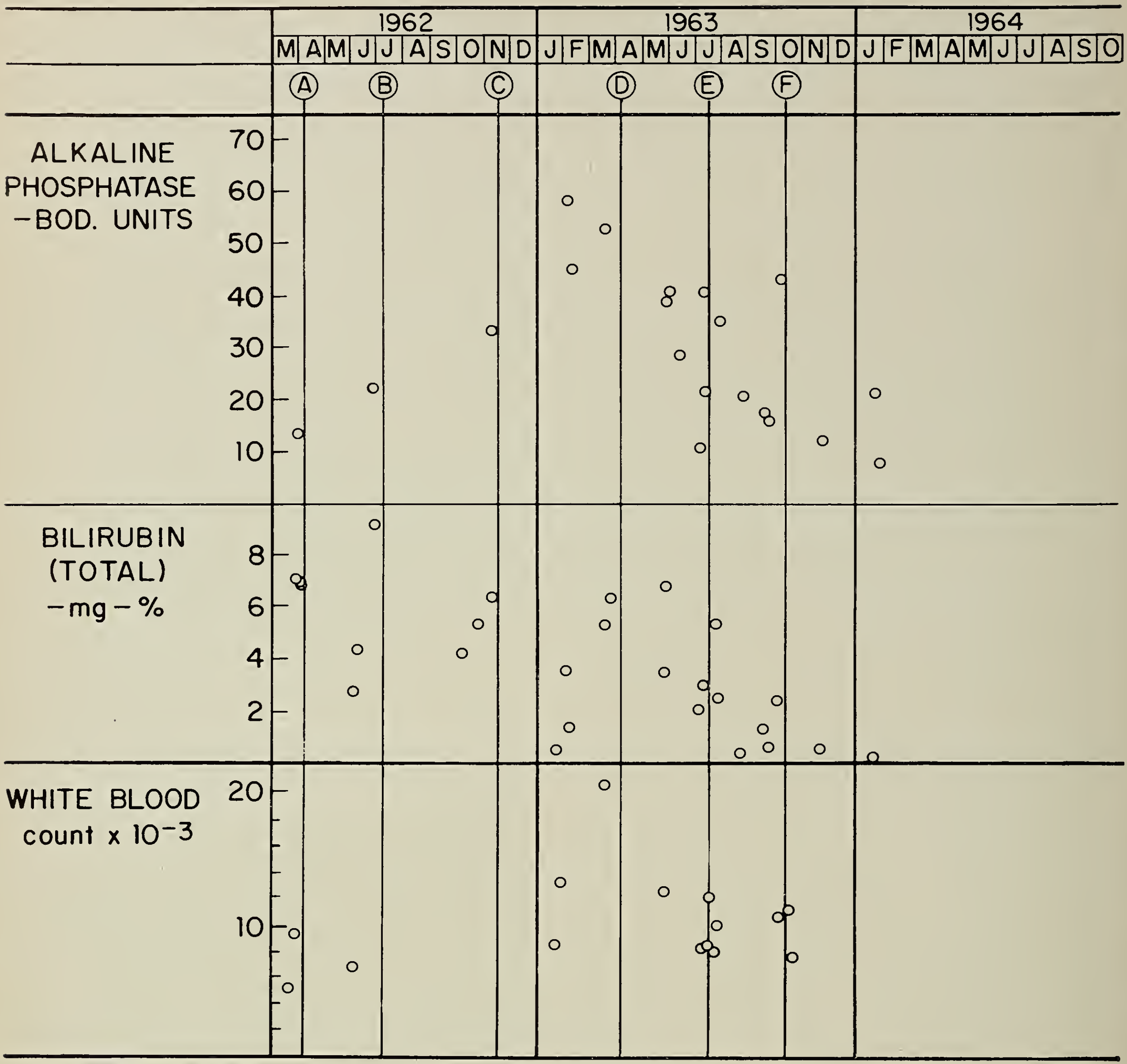

FIGURE 6 - SUMMARY OF SELECTED CLINICAL ANALYSES DURING VARIOUS PROSTHETIC INSERTIONS

coupled with a prosthetic conduit that would not permit the reflux flow to occur. It was also necessary that there be a permanent fixation of the prosthesis at the site of the anastomosis so that it would not slip out of place and allow the stricture to recur. At this writing it appears that the Sterling[4] concept with a rigid duct modified with a flexible closure can provide greater reliability. The use of polytetrafluoroethylene offers numerous design modifications, as artificial bile ducts warrant more general and widespread usage in the surgical correction of biliary defect or obstruction.

ACKNOWLEDGEMENT

The authors gratefully acknowledge the assistance of the Pennsylvania Fluorocarbon Company, Malvern, Pa. and the Dilectrix Corporation, Farmingdale, N.Y., for the generous contribution of their fabricated forms made from "Teflon" TFE and FEP fluorocarbon resins; Kumlon Crafts, Arden, Delaware, for special fabricating items, and to Mr. Silas A. Braley, Director, Dow Corning Center For Aid to Medical Research, for generous contribution of silastic tubing.

Also appreciated are the services of Dr. Joseph V. Casella, Director Wilmington General Hospital Laboratory, and Mr. Irvin Schreibman, biochemist, for the innumerable clinical analyses.

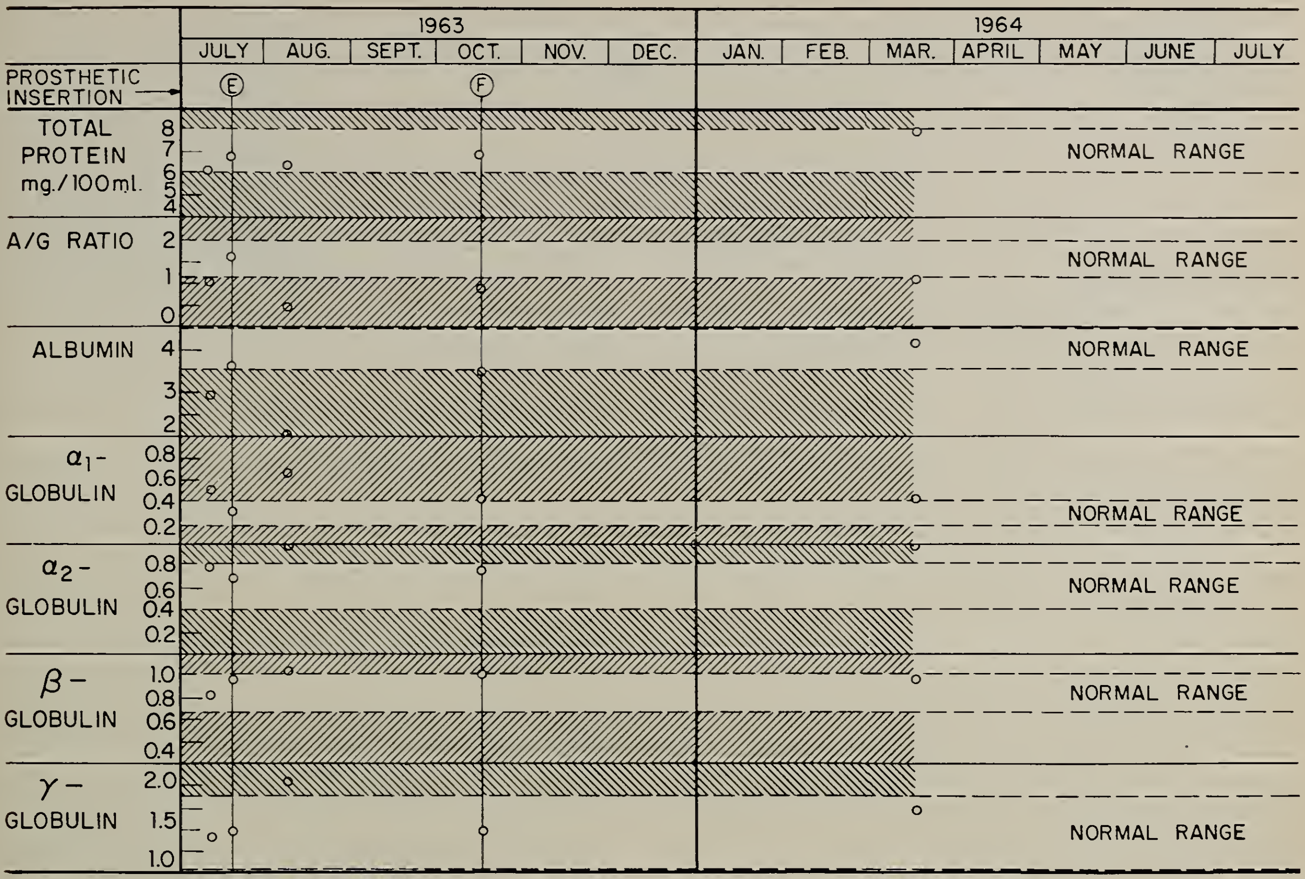

FIGURE 7 - SUMMARY OF ELECTROPHORETIC PROFILE PEAKS FOR SURVEILLANCE OF SERUM PROTEIN CHANGES

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THE NEPHROTIC SYNDROME DURING PREGNANCY

(*Continued from Page 149*)

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Delaware Academy of General Practice

ENVIRONMENTAL HEALTH AND THE A.A.G.P.

The American Academy of General Practice has added two new committees to the Commission on Environmental Medicine. One is the Committee on Clinical Investigation and one is the Committee on Indian Health.

The Committee on Clinical Investigation has been formed to cooperate with government agencies, private medical and research foundations and the Pharmaceutical Manufacturers Association in preparing the general practitioner for activity in the field of clinical investigation.

The purposes of the committees are:

a.) to encourage general practitioners to engage in legitimate clinical investigation.

b.) to represent general practice vis-a-vis the Food and Drug Administration, the many agencies (governmental and private) that conduct research programs, and the P.M.A. who promote much of the research done today.

c.) to establish standards and prerequisites for general practitioners in the field of clinical research that will satisfy the F.D.A.; along with the determination of the legal responsibilities of the practicing physician will be explored in cooperation with the P.M.A.

d.) to establish a program wherein Academy members can conduct episodic surveys as the British College of General Practice does.

The Committee on Indian Health was established after the Chief of Division, (Dr. Carruth Wagner), Department of H.E.W. asked for help from AAGP. The needs were family doctors who could be willing and able to make tours of the Indian Reservations; supply a report of existing conditions, make specific recommendations for improving facilities and care of patients, and to suggest long range planning.

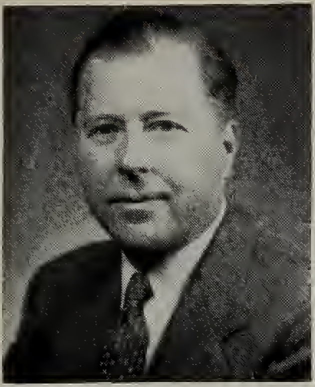
It is known that the majority of Indians are on Federal Indian reservations (located in states west of the Mississippi River and in Alaska)—and where Indian Health projects are thereefore concentrated. Where public health service facilities are not available or adequate, contract arrangements for care are made with private facilities and doctors.

In April 1964, Dr. Drill and the Indian Health Committee members made a tour of reservations in Minnesota and North Dakota. In one Federal Indian Hospital there were 3 staff physicians caring for a case-load of 18 patients with a capacity of 30 patients. The out-patients department operated 3 days a week and saw 1,200 patients per month. Uncomplicated obstetrics was done here, and a better than average x-ray facility was present along with good surgical facilities. The physicians did not feel qualified to do even minor surgery, so many patients were not receiving the care the facilities would permit. Several reasons mentioned were lack of an anesthetist and discouragement of staff doctors from attempting even minor procedures because of possible legal complications.

Several more reservations were visited, and some of the recommendations to U.S.P.H.S. were as follows:

1. More preventive care for Indians
2. Strengthen field health programs
3. Utilize facilities for better patient care
4. Provide more personnel-nurses, health education and physicians
5. Proper orientation of staff officers in Division of Indian Health
6. That the P.H.S. Division of Indian Health immediately initiate and develop general practice residency training programs to fullest extent.
7. Initiate a program of planned motivation in health careers among general Indian youth population.
8. Consider making use of Project MORE (an AAGP activity) to interest Indian high school students in health careers throughout the entire Indian population

Marjorie E. Conrad, M.D.



President's Page

COMPLETION OF COMMUNITY SABIN POLIO VACCINE PROGRAM

Your State Medical Society completed the most extensive Community Health Program in its history when on Sunday, April 19th, the final make up clinics for the administration of Sabin Polio Vaccine were conducted. In the series of centers opened throughout the State in 1963-1964, volunteers gave three (3) doses of the different types of Sabin vaccine to about 220,000 persons, a creditable number indeed. The Medical Society sponsored this project, along with the State Board of Health and the Chapters of the National Foundation, the Red Cross, the State Pharmaceutical Society, and the Women's Auxiliary to the Medical Society of Delaware.

The program would not have been possible without the close cooperation of the Press, Radio, TV, Wilmington Department of Health, Schools and others. Volunteers gave willingly of their time not only in the operation of clinics but also in getting out the word to all who needed to take the vaccine. There were physicians, dentists, nurses, pharmacists, school personnel and hundreds of others interested in protecting the health in their respective communities.

Dr. Henry Stroud, who headed up this program for the Society, is to be commended for the splendid effort put forth in planning, organizing and carrying out this tremendous undertaking. This is a splendid example of the medical profession's interest and active participation in a program which will surely serve to reduce poliomyelitis in Delawareans to a minimum, and save the unnecessary misery and expense of paralytic polio for those who in their wisdom availed themselves of this opportunity.

My personal thanks go to all who helped.

Floyd I. Hudson

In Brief

Eye Bank Merger

The eight-year old Philadelphia Eye Bank—which brought sight to some 500 persons—has merged with the Wills Eye Hospital Eye Bank. Activities transferred a registry of some 15,000 donors who have offered corneas after death. Since corneas are extremely perishable and must be transplanted promptly, families are urged to get in touch with the newly merged eye bank, Wills Eye Hospital, 539 E. Alleghany Avenue, Phila., at once after a donor's death. All records of the Philadelphia Eye Bank will be transferred to Wills Eye Hospital, 539 E. Alleghany Avenue, Phila.

New Test For Diagnosis Of Pheochromocytoma

A simple new test for the diagnosis of pheochromocytoma has been developed by scientists of the Public Health Service, HEW. The test is safe, reliable, and easy enough to be done in any doctor's office. At the National Heart Institute, tests showed that tyramine injections produce a much greater blood pressure rise in patients with pheochromocyoma than in normal subjects or patients with essenial hypertension. Pheochromocytoma, a tumor that arises in the adrenal glands, usually produces and releases in the blood large quantities of catechol amines, especially norepinephrine. These are primarily responsible for the symptoms often attending the disorder; hypertension, headaches, anxiety, and excessive sweating, elevated metabolic rate, elevated blood sugar, and increased heart rate. Because many of these symptoms resemble those of hyperthyroidism, essential hypertension or diabetes, pheochromocytoma can pose a ticklish problem in differential diagnosis. Tyramine raises blood pressure by releasing norepenaphrine from tissue storage sites. This pressor response is greatly enhanced in patients with pheochromocytoma, probably because their tissue storing sites have become extremely well stocked—supersaturated with norepenaphrine as a result of taking up the amine's being intermittently or continuously discharged into the blood by the tumor. These findings were reported at a recent meeting of the American Federation for Clinical Research.

New Calorie Diet Quotas

The National Academy of Sciences has reduced its recommended daily calorie intake for adults on the ground that Americans are living a softer life with less physical activity. Calorie requirements for the so-called "reference man"— 25 years old, weight 145 pounds, moderately active, were reduced from 3200 per day to 2900. Calorie requirements for the "reference woman" 28 years old, 128 pounds weight, active, were reduced to 2100 calories per day from 2300. The daily recommended consumption of thiamine, niacin and riboflavin were also cut. A new revision included alcohol for the first time in the consideration of nutrients. The Board estimated that Americans, on a per capita basis, consumed 76 calories of alcohol per day which includes children and non-users—the average consumption of drinking adults is much higher. PHS also reported that the decline in the US death rate has been halted. It was attributed to (1) the leveling off of infectious disease deaths and (2) increased death rates from chronic diseases and accidents. *The Month in Washington, A.M.A.*

Editorials

MEDICINE AND RELIGION

At the May meeting of the Council of the Society, President Hudson was authorized to appoint a committee on Medicine and Religion.

The relationship between the medical profession and the ministry has been the subject of considerable interest in this area and was discussed in a previous editorial in this Journal. (March 1963) Approximately seven or eight years ago a series of meetings were held under the sponsorship of the medical profession to acquaint members of the clergy with our medical problems in the relationship between the clergy and members of their congregation who happend to be patients in the hospital. This series of meetings was extremely well received and the Journal is somewhat disappointed that such a series has not been repeated. The organization of a committee on Medicine and Religion will undoubtedly be a step forward in reopening the channels of communication between these two professions, each with an important part to play in the treatment of the sick patient.

There have been advances in medical science in the past decade which in themselves would call for such a committee to work out problems which, while basically medical, have a large religious and perhaps legal aspects. The most obvious problem arising in the past decade has to do with the use of the machines for cardiac resuscitation. Not infrequently a patient is brought to the emergency department of one of our hospitals in a condition that would meet all of the legal requirements of being pronounced dead. With the use of modern equipment, a heart beat is reinstituted and, not infrequently, the heart beat will continue after a time without the use of a machine. In other instances the heart beat is completely dependent upon the machine and with every attempt to stop the machine, the heart beat likewise will stop. An immediate question, the answer to which involves more than medical science, is when to apply the machine and when it should be withheld? A more immediate question is when should the use of the machine be discontinued once it has been instituted?

The June 29th issue of JAMA carries a report of a heart transplantation in man performed in January of 1964. In the report the moral issue of clinical heart transplantations is discussed. While this is a subject that has not yet reached Delaware and probably will not do so in the foreseeable future, it is one that sooner or later will involve all of us and, again, is a subject for consideration by such a committee.

THE BATTLE OF THE COLON BACILLUS— OR THE RAUCOUS CAUCUS

On July 7th a public meeting was held in Port Penn for the purpose of having representatives of the Board of Health, the Fish and Game Commission, and the Water Pollution Commission present to the public their findings and their action regarding water pollution of the Delaware River and specifically in the Augustine Beach area. Unfortunately, the purpose of the meeting was not clearly stated and many came with the idea that the meeting was held for the purpose of deciding policy. One outspoken guest, after refusing to behave or leave, was removed by the men in buff and blue. After this brief outburst the meeting proceeded with relative calm.

The pollution expert presented numerous figures to show that the river is indeed polluted. When challenged regarding the location of the line between normal and abnormal, he referred to the United States Public Health Service. One astute observer noted that while the expert had every confidence in his figures regarding water pollution, he obvisouly chose to ignore other less controversial statistics from the USPHS—he chain smoked the entire evening.

The present situation: Augustine Beach was closed to swimmers and bathers 23 months ago and the situation is still being "studied." It would cost ten million dollars to clean up the river and "Augustine Beach isn't worth it."

Well, perhaps Augustine Beach isn't but how about the river, the State, and the entire Delaware Valley?

Auxiliary Affairs

ANNUAL REPORT OF THE NEW CASTLE COUNTY WOMAN'S AUXILIARY

This has been a busy and productive year—a year of excellent committee cooperation and a year of peak rewards. The combined talents and efficiency of the officers, committee chairmen and the board of directors, deserve the gratitude, not only of the president, but of every member, for having functioned willingly and capably when called upon.

During the year, five general membership luncheon meetings were held. We also met for six executive committee sessions which included one planning meeting in May, 1963, at which time ideas for the coming year were formulated and plans discussed. Our board of directors met for three regular meetings and one special session, and the president attended all standing committee meetings in a non-officio capacity.

At each of our five general membership luncheon meetings, for which we were fortunate to have excellent speakers—chosen for program interest and diversification of subject matter—the speaker remained to be our guest at luncheon, prepared and served by our members. The profit from these luncheons amounted to approximately $300, and was placed in a separate fund to provide the Auxiliary with its own kitchen needs.

Our county Auxiliary donated the admirable sum of $1,018.65 to A.M.A.E.R.F., collected during the year from the sale of appreciation and sympathy cards, a benefit dance and a first prize for our entry in the "Table Topic Tea." Other donations during the year included: $75 to the Occupational Therapy Department at Farnhurst; $25 to their Christmas time "Operation Reindeer" program, and $50 to supplement articles and novelties at the booth which we sponsor at the annual fair for the patients at Farnhurst.

The greatest challenge came to our Community Service Committee when 105 volunteers served as registrants or nurses in the Medical Society sponsored Sabin Vaccine program. This amounted to over 600 hours of work for the three clinic dates and the make-up date. In addition, many games, clothes, and other needed materials were collected and distributed to Farnhurst, Emily Bissel Hospital and the Florence Crittenton Home.

When our annual benefit was held to provide funds for the paramedical education grants-in-aid, 103 tables of bridge playing members and their guests were entertained at the DuPont Country Club on St. Patrick's Day. The proceeds, augmented by several donations and a bake sale, provided the Careers Committee with the grand total of $922.35; a record breaker for this county.

During the year, 9 sewing meetings were held; over 600 baby garments were turned in to the Visiting Nurses. Our county provides a budget of $350 each year for this worthy endeavor.

A new major committee called "Operation Handclasp" provides a friendly hand to our visitors from foreign lands who are furthering their medical education in our county hospitals. Its public relations value is limitless and an adequate budget has been recommended to allow it to function and expand.

An efficient index card file system has been instituted of all pertinent information regarding our members past Auxiliary activity; the committees on which they would like to serve; paramedical education; knowledge of speaking a foreign language etc., which brings the history of our county up to date and is an excellent source of information.

This year should hold its own in our archives. Our complete review and revising of our by-laws and constitution is the only unfinished business, but this can provide the challenge to those who come after us.

Kathleen E. Aikins, President

MEDICAL SOCIETY OF DELAWARE

1776-1789-1964

175th ANNUAL MEETING

September 10 and 11, 1964

PROGRAM

HOUSE OF DELEGATES

September 10

School of Nursing, Beebe Hospital, Market Street, Lewes

7:30 P.M. House of Delegates

10:30 P.M. Reception for all physicians and their wives

SCIENTIFIC SESSION

September 11

Bethel Fellowship Hall, Fourth and Market Streets, Lewes

8:45 Registration—Exhibits

9:15 Call to Order—Floyd I. Hudson, M.D., President, Medical Society of Delaware

Welcome to Lewes—Robert F. Lewis, M.D., President, Sussex County Medical Society

Report of House of Delegates—Joseph W. Abbiss, M.D., Secretary, Medical Society of Delaware

9:30 PANEL ON TRAUMA—Moderator—James Beebe, Jr., M.D.

Adrian E. Flatt, M.D., Director of Orthopedics, State University of Iowa
Dr. Flatt will discuss soft tissue injuries of the hand.

Paul A. Skudder, M.D., Clinical Assistant Professor of Surgery, Cornell Medical Center
Dr. Skudder will discuss wound infections, tetanus and their proper treatment.

James E. Nixon, M.D., Physician to the Philadelphia Eagles
Dr. Nixon will discuss injuries from sports, including the problems of multiple injuries.

Discussion from the floor

11:00 Intermission—Exhibits

11:30 LOW BACK PAIN

Emery K. Stoner, M.D., Clinical Director, Department of Physical Medicine and Rehabilitation, Hospital of the University of Pennsylvania

12:10 President's Address—Floyd I. Hudson, M.D.

Business Meeting

Election of President-Elect

12:40 Intermission—Exhibits

1:00 Lunch

1:45 PSYCHIATRIC PROBLEMS IN EVERYDAY PRACTICE

Frank R. Ervin, M.D., Associate Professor of Psychiatry, Harvard Medical School

2:25 A RE-EVALUATION OF ORAL DRUGS FOR DIABETES

Henry A. Dolger, M.D., Director, Metabolic Clinic, Mt. Sinai Hospital, New York

3:05 Intermission—Exhibits

3:35 PANEL — DRUGS TO USE AND NOT TO USE IN EARLY PREGNANCY

Walter Cherny, M.D., Associate Professor of Obstetrics, Duke University.

Also Pediatrician, to be announced from Duke University.

4:30 Adjournment

Note: The Delaware Diabetes Association will meet immediately following the adjournment.

The Medical Society of Delaware gratefully acknowledges the assistance of the Eli Lilly Company in the presentation of the scientific session.

Lewes Yacht Club, End of Cedar Street

6:30 Reception and Cocktails

7:30 Dinner Dance

September 12

Fishing party—Golf at Rehoboth Country Club—Beach

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PROGRAM OF THE THIRTY-FIFTH ANNUAL MEETING

THE WOMAN'S AUXILIARY
TO THE MEDICAL SOCIETY OF DELAWARE

Friday, September 11, 1964
Dinner Bell Inn
Rehoboth, Delaware

10:00 A.M. Registration and Coffee Hour

11:00 A.M. General Session

- Call to Order—Mrs. James T. Metzger
- Pledge of Loyalty
- Address of Welcome
- Introduction of Guests
- Memorial Service
- Roll Call of Delegates—Mrs. John W. Barnhart
- Treasurer's Report—Mrs. Emerson Y. Gledhill
- Reports of County Auxiliaries
  - Kent—Mrs. M. H. Mires
  - New Castle—Mrs. James P. Aikins
  - Sussex—Mrs. W. P. Portz
- National Convention—1964
  - Delegate's Report—Mrs. Laurence L. Fitchett
- Report of Priority Committees
- Report of the President—Mrs. James T. Metzger
- Report of the Board of Directors—Mrs. Robert F. Lewis
- Report of the Nominating Committee—Mrs. Lemuel C. McGee
- Election of Officers
- Address—National Representative Woman's Auxiliary to the American Medical Association
- Adjournment

1:00 P.M. Luncheon—

- Invocation
- Introduction of the Advisory Committee
- Greetings from the Medical Society of Delaware—Floyd I. Hudson, M.D., President
- Presentation of Gavel and President's Pin
- Inaugural Address—Mrs. Laurence L. Fitchett
- Adjournment

EXHIBITORS

BOOTH

A-1 John G. Merkel & Sons, Inc.

See the latest and finest in Medical and Laboratory equipment for hospital or office and the latest equipment for the home care of your patient. This equipment available upon your request. Free BEV-MAID at our exhibit for your pleasure.

A-2 Ciba Pharmaceutical Co.

ESIDRIX-K® (hydrochlorothiazide and potassium chloride CIBA) This exhibit will enable the CIBA representative to discuss the importance of potassium in normal physiology, the clinical symptoms of potassium depletion, especially resulting from the administration of a diuretic, and a way to obviate this problem effectively and conveniently with ESIDRIX-K.

A-3 The Coca-Cola Company

"Ice-cold Coca-Cola served through the courtesy and cooperation of the Salisbury Coca-Cola Bottling Company, and The Coca-Cola Company."

A-4 Pfizer Laboratories

A-5 Mutual Benefit Life Insurance Co.

"Financial Planning for the Physician." Representatives whose special training and knowledge enable them to understand the physician's unique financial problems can supply information and ideas that help the physician build and keep financial assets. Free booklets on money management, insurance, estate planning.

A-6 Bertholon-Rowland Agencies

Bertholon-Rowland Agencies have been administrators of the Medical Society of Delaware Accident and Health Plan since 1953.

In keeping with the needs of the members and the changes in protection available in the industry many improvements have been made in the plan. Personal counseling is part of the Bertholon-Rowland Agencies service upon request.

A-7 Wm. P. Poythress & Co.

Mudrane, established Poythress combination for relief of bronchial asthma, and its new companion product, Mudrane GG, will be featured at the Poythress exhibit booth. Solfoton, Solfoserpine, Trocinate, Panalgesic and Synirin will also be featured. Your requests for descriptive literature, reprints, and professional trial quantities of Poythress products are cordially invited.

A-8 Alan G. Day

Medco Products

A-9 Milex of Delaware Valley

Gynecological specialties for both office and operating room will be on display. Amino-Cerv, a new specific for cervical therapy will be discussed. New developments in uterine cancer detection will be shown. In addition, to assist Doctor in counseling his patients, copies of "A Doctor's Marital Guide To Patients," "A Doctor Discusses Menopause," "What Teenagers Want to Know," "A Doctor Discusses Pregnancy," and "A Doctor Talks To A 9 to 12" will be available. Stop by and say Hello.

BOOTH

B-1 Schering Corporation

Schering Corporation invites you to their exhibit where representatives will be on hand to discuss the most recent advances in one of the SCHERING PRODUCT RELIEF GROUPS.

B-2 Merck Sharp & Dohme

Our display will feature "Aldomet," "Aldoril," the latest in hypertension and "Rubeovax" for prevention of measles. Our associate, L. K. Mears will be in charge of this meeting, assisted by A. V. Ohlendorf.

B-3 Encyclopaedia Britannica

Encyclopaedia Britannica welcomes delegates to the Medical Society of Delaware Meeting and invites them to examine the great new edition of Britannica. Official delegates may now purchase this magnificent set at an exhibit offer only available at our Meeting exhibits. Visit Britannica's booth for free descriptive literature.

B-4 Wyeth Laboratories

Featuring "SMA New Formula S-26," the "Tubex Disposable Injection" system, and "Unipen." Mr. James W. Duffy, District Sales Manager and Mr. H. W. Frye, Mr. Peter Rodler, Mr. David Swingle, Sales Representatives.

B-6 P.R.O., Incorporated

"The Professional Retirement Organization." Authorized service company for the Medical Society of Delaware Group Retirement Plan and Trust. Experienced personnel will be pleased to answer any questions you may have on the "Keogh Act" or the Society's Plan. Literature available.

B-8 Cutter Laboratories

The Cutter display and exhibit will feature Cutter Hyper-Tet (Tetanus Immune Globulin-Human) now available nationally to all physicians. The display will be built around the new policy announcement of the American College of Surgeons on passive immunization with human tetanus antitoxin and the distinct advantages Hyper-tet has to offer.

B-9 Endo Laboratories, Inc.

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B-10 G. D. Searle & Co.

You are cordially invited to visit the Searle Booth where our representatives will be happy to answer any questions regarding Searle Products of Research. Featured will be Enovid for ovulation control and pregnancy and mentrual disturbances and Flagyl, a potent, new trichomonacidal agent for trichomonal vaginitis, cervicitis, urethritis and protatitis.

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President, Medical Society of Delaware, 1964

Delaware
Medical Journal

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RECOMMENDATIONS OF A MEDICAL SCHOOL FEASIBILITY SURVEY

This material became available shortly before press time, and is published in lieu of an editorial in the interest of distributing it widely and promptly.

In January, 1963 the Academy of Medicine agreed, at the joint request of the Medical Society of Delaware and the University of Delaware to conduct a survey of the feasibility of a medical school in Delaware. Last month the survey was completed and released by the president of the Academy, A. J. Morris, M.D. The survey makes the following recommendations:

1. On the basis of the data currently available to it *this committee does not now recommend the establishment of a tax supported medical school in Delaware within the next decade.*

2. As a result of projections based on present knowledge *we recommend that the long range plans of the state and of the University include provisions for the beginning of a new medical school in Delaware in about ten to fifteen years.*

3. In view of the demonstrably greater impact on its surroundings *we recommend that efforts be extended to obtain financing for a full medical school with clinical facilities to begin some ten to fifteen years hence and that a two year school be planned only if it is necessary to phase this development over several years.*

4. The problems associated with a physician shortage in the two southern counties are clearly recognized. They are in no sense unique, however, being indigenous to rural environments almost universally. To this end *we recommend the establishment of a citizens' committee, perhaps under the aegis of the Delaware Academy of Medicine, to include representation from the University and from the medical profession, for the purpose of conducting a thorough, long range study of ways to improve the delivery of health care to rural communities.*

5. We note an excellent beginning in the development of post-M.D. educational programs within the consolidated hospital system of Wilmington. *We recommend increased effort in the development of these programs, perhaps with closer ties with one or more of the teaching institutions in Philadelphia. Such development can mean much to the entire area.*

Kenneth E. Penrod, Ph.D., Vice-President for Medical Affairs, University of West Virginia, was director of the survey and was assisted by: Arthur Ebbert, Jr., M.D., Associate Dean and Assistant Professor of Medicine, Yale University School of Medicine; Lester J. Evans, M.D., former Executive Director, New York State Committee on Medical Education; Joseph C. Hinsey, Ph.D., Director, New York Hospital-Cornell Medical Center; John McK. Mitchell, M.D., Director, Medical Education, The Bryn Mawr Hospital; Gilbert H. Mudge, M.D., Dean, Dartmouth Medical School; Joseph C. Volker, D.D.S., Vice-President, University of Alabama Medical Center.

Copies of the survey with tables, summary and conclusions may be obtained from the Academy upon request.

NURSING SCHOOL OF WILMINGTON, INC.

• These articles, prepared by the Executive Director and Staff of the Nursing School of Wilmington, Inc., are being published at the request of the Public Relations Committee of the New Castle County Medical Society to foster a better understanding within the medical profession of the policy and methods of this approach to nursing education. They do not necessarily reflect the views of the Committee.

Aims and Purposes . . .

Rita C. Coll, R.N., M.A.

Doris C. Peo, R.N.
Marguerite Walder, M.S.

Alice Cook, R.N., M.A.
Doris Noyes, M.A.

During the past decade doctors, teachers, nurses, scientists, engineers and practically all engaged in the many professions have found themselves short-handed. The too rapidly accelerated baby-crop increased the nation's youthful population disproportionately. Too many people needed to be served and there were altogether too few available and prepared to provide these services.

It could have been expected that leaders in the medical profession were rightfully concerned and that they diligently sought ways of increasing the supply of doctors and urged a more efficient use of their services. The same story can be told of the other professions.

Nurses became more and more concerned about their profession and the urgent need for improving the quality of service nurses give patients. The supply of nurses was short and had to be increased. The education of student nurses was wasteful of student time and lacked in substantive base both in the physical and social sciences as well as in the areas of communication. It had to be made more efficient and effective. Experiments in team-nursing care had demonstrated that nurses with different levels of training were most useful. There was a unique place for all—practical nurse, the two or three-year diploma nurse and the graduate with four or more years of college education. It was high time that a hard look be given all phases of nursing education.

Many articles on the quality of nursing care were published in which tough punches were not pulled and current nursing care, given under conditions of short-supply, was sharply criticised. Unless something constructive was done "The Coming Scandal in Nursing" was prophesied and dreaded. Although thousands of nurses continued their devoted and dedicated work, most of them were convinced that nursing service had to be improved, that the education of student nurses had to be modernized, made more varied and effective, and that the whole profession had to be up-graded.

Miss Coll is Executive Director of the Nursing School of Wilmington, Inc.

Miss Cook is Bio-Physical Science Instructor and Medical-Surgical Nursing Instructor at the Memorial Hospital, Wilmington.

Miss Noyes is part-time Science Instructor at the Delaware Hospital, Wilmington.

Mrs. Peo is Librarian at the Wilmington General Hospital School of Nursing.

Miss Walder was formerly Assistant Dean at Lasell Junior College and then at the University of Pennsylvania.

Throughout the country this conviction spread. In Delaware three of our fully-accredited nursing schools courageously arose to ask themselves what they could do to improve nursing care in this community.

A careful study of the Wilmington situation was authorized. To whom could this crucial study be entrusted? After a long and careful investigation the local committee found that the independent firm — Booze, Allen and Hamilton—was clearly best qualified to undertake it. And to it was assigned the task. Able and competent members of their staff were designated to produce the study, the analysis and recommendations sought for the Wilmington area.

The new School of Nursing which will open its doors to the first class in September, 1965, is a direct out-growth of this report. The three Hospital Schools of Nursing at Delaware Hospital, at the Memorial Hospital and at the Wilmington General Hospital will graduate their last classes in June, 1966, and all the facilities, energy, efforts, and services of the three will be joined in one new and large school—*The Nursing School of Wilmington, Inc.*

At this time the new School is in the planning stage; much spade-work has been and is being done. Many vital decisions remain to be made. The development, as it proceeds, can be expected to be volutionary with changes and improvements constantly occurring, particularly in the coming few years. The target however will remain unchanged—to provide better nursing care for the patients in the hospitals particularly in the Wilmington area, with a more adequate supply of nurses who are well prepared to carry out the demanding assignments of modern nursing.

EXPECTATIONS OF PROFESSIONAL NURSES

in Today's Society . . .

Professional nurses are expected to perform functions not immediately apparent to the public. Coordinating a plan of physical care for the patient, following medical direction and utilizing adjunctive services such as laboratory, diet kitchen, etc., is only part of their responsibility. Nurses are also expected to be able to evaluate and assist others in planning to meet the psychological, emotional and social needs of the patient. They are expected to assess the ability and facility of others who work with them, or under their supervision.

To prepare nurses to function adequately in their roles, an educational program must provide foundations in biological and physical sciences, an understanding of the social sciences, an ability to communicate effectively a knowledge and understanding of medical science and of nursing care. A student in nursing today needs to receive an education that will prepare her to undertake the duties of a professional nurse in the shortest period of time. To slowly acquire this education, as would an apprentice, is neither feasible nor defensible in this modern age.

The public expects modern scientific nursing care without loss of the many invaluable services that have become traditional in the profession. It expects preparation, understanding and devotion. It is concerned about the scarcity of adequately prepared practitioners.

A few paragraphs taken from the cover story of the June issue of *M.D.* indicates the desire of the medical profession that nursing education be improved and that the present shortage be alleviated.

> *"Far removed from the Nightingale style of nurse, whose main task was to keep a patient clean and comfortable, today's nurse is expected to perform many tasks formerly done only by physicians: give transfusions and injections,*

catheterize, administer oxygen. She must also be familiar with numerous machines such as electrocardiograms, roentgen apparatus, radiation equipment."

"Although there are now some 550,000 nurses at work in the United States, more than at any other time, there is still a general shortage of hospital nurses of about twenty precent; in psychiatric hospitals the shortage is four times as great; last year there were some 1000 vacancies on the faculties of nursing schools.'

"Legislation now before Congress asks for $110 million to build new nursing schools or expand existing ones, $58 million for recruitment and training, $112 million for scholarships and loans."

"The flame of the Lady of the Lamp still burns brightly, but in an expanding world it needs more fuel."

The nursing profession is diligently working to improve the quality of education of nurses at all levels. Both the National League for Nursing and the American Nurses Association are not only concerned about the shortage but through an active Committee on Careers, are doing something about it. For example, one of its divisions, the Future Nurses Clubs in high schools now has about four thousand in its growing membership.

The thoughtful concern of so many, during the past decade, has solidified several conclusions. The curriculum should provide, in a unified and well planned pattern, a combination of general and professional courses that will equip the student for beginning professional nursing service and it must be constructed in a manner that will enable more nurses to be well educated, and in the shortest period of time.

ORGANIZATION AND ADMINISTRATION . . .

One of the remarkable (and incidentally forward-looking) aspects of the new Wilmington School was the action of the separate Boards of Trustees of the Delaware, the Memorial and the Wilmington General Hospitals in creating and having chartered a new and separate corporation. To this corporation they voluntarily yielded the authority for developing a new School and carrying out the responsibilities of providing nursing education. This action was taken jointly by each of the three groups, after careful study and mature deliberation.

Under appropriate laws of the State of Delaware the new corporation received a charter as a separate, non-profit educational organization with authority to execute all acts necessary to administer a School of Nursing and to grant diplomas to those who successfully satisfy the requirements set by the school.

As constituted, the Board of Trustees consists of twelve members. Six members have been selected by the three supporting hospitals—two from each of the founding hospitals: Mrs. Lammot du Pont and Mr. John L. Brill from Delaware Hospital; Mrs. Wendell E. Broad and Mr. William W. Geddes from Memorial Hospital; Mr. Anson B. Nixon and Mr. Endsley P. Fairman from the Wilmington General Hospital. Five of the remaining members have been selected by the Board itself from industry, education, and the medical and the nursing professions. They are: Dr. Norman L. Cannon from the New Castle Medical Society, Dr. Virginia M. Harris from the Coordinating Council of Nurse Organizations, Dr. Charles E. Maroney from the medical profession at large, and Dr. Carl J. Rees, from the educational profession. One additional member is to be selected by the Board from the nursing profession at large.

The position of Director of the School is a very important one, for this post carries with it the responsibility and the authority of administering the School. The Director chosen was Miss Rita C. Coll who was selected by the Board with the recommendation of an Advisory Committee consisting of the Directors of Education of the three hospital schools. Miss Coll earned a baccalaureate degree from Villanova College, an R.N. from the Philadelphia General Hospital School of Nursing and a master's degree from Columbia University. Her experience in nursing and nursing education was acquired as College nurse at Rosemont and Bryn Mawr Colleges, as Director of Nursing Education at Temple University, as instructor at the University of Pennsylvania, and, immediately before coming to Delaware, as Director of Nursing Education at the Women's Medical College of Pennsylvania. Miss Coll assumed her new duties in Wilmington on October 1, 1963. The Director of the Nursing School of Wilmington has no responsibilities for nursing service. Her work is that of developing and implementing the educational program.

Various faculty committees have been formed and are at work. There is an Admissions Committee, a Uniform Committee, a Coordinating Committee; a Committee on Philosophy and Objectives; a Medical-Surgical Nursing Committee. As the present classes in each of the three schools are graduated and the faculty of the new school has been assembled it will be possible to reorganize these committees in a more unified and cohesive manner.

One of the vital committees in the School is the Coordinating Committtee now made up of the Directors of Nurses and the Directors of Nursing Education of the three hospitals. This committee coordinates education with service.

The Faculty is of necessity involved in helping to formulate the educational policies that will determine the conduct of the school. Regular Faculty meetings are now being held and minutes of these meetings are on file.

Committee recommendations are acted upon by the Faculty group. Personnel policies practiced in the three schools will remain in force until the new School actually starts. Then committees will undertake to coordinate and make recommendations to the Faculty and to the Board of Trustees on needed revisions. New descriptions of faculty positions in the School will be developed.

STATE APPROVAL AND ACCREDITATION . . .

In the organization of the new School it was clearly understood that service by students to the hospitals was not to be expected and that a student's full time was to be devoted entirely to acquiring an education. This educational advance was built into the new School's policies in the creation of a separate Board of Trustees who were charged with full responsibility for the education of nurses. It must be pointed out that this action was indeed a remarkable advance in nursing education in Wilmington. It was not an easy decision for the hospitals to make.

At the same time in taking this action an entirely new school was created, certainly from the legal point of view. This meant that all the developmental work required of a completely new school had to be undertaken by this school. All studies and documented evidence needed in the preparation of an application for approval by the State Board of Nurse Examiners had to be made. Without the approval of this Board students cannot be admitted to the School and no nursing education can be given. This is an essential first step in accreditation.

With a Faculty actively engaged in the work of their own School, it can be realized that it was not a simple task. Nevertheless, with the genuine cooperation of all members of three Faculties, the work has gone forward.

THE EDUCATIONAL PROGRAM . . .

The program to be offered at the Nursing School of Wilmington, Inc., will be a two-year diploma program in basic nursing education. It will be unique in that it will have separate administrative control, but will be patterned after existing programs in nursing that are an integral part of community colleges, junior colleges, or in the lower division of a four-year college or university. The two-years spent in the Wilmington School of Nursing will not be equivalent to the first two years of a baccalaureate program. However, the school is building a curriculum that will be essentially that of an associated degree program. It is the hope and expectation that this goal can be reached soon.

Graduates of this program may earn some college credits in courses such as science and communication which will be studied in the Extension Division of the University of Delaware. The transfer of these credits to a baccalaureate program is not a certainty. Acceptance of the credits will depend on the college or university to which the student may later apply if nursing education is continued and a degree in nursing sought. Some colleges and universities that confer the Bachelor of Science degree in Nursing do accept a limited number of credits for transfer, using the Graduate Nurse Examination of the National League for Nursing as a basis in making this decision.

Instruction in nursing will be given by the Faculty of the School of Nursing who will be charged with the task of developing and evaluating each course of study pursued. More full-time faculty members will be employed. It has been estimated that at least forty faculty members would be required to do the same work in three separate schools. It is estimated that 20 to 24 members will be sufficient in the new school. The faculty will select the learning experience and the methods of teaching that will help the student transfer and apply scientific principles and understanding of human behavior to the nursing care of patients. Through the careful selection of learning experiences on-duty practice can be limited to an amount considered essential to beginning nursing service. Each nursing course will include theoretical and clinical laboratory instructions. Students will have experience caring for patients, under the direction of the nursing instructor, at a time when these experiences will have the most meaning for the student.

The clinical laboratory experiences will be provided using the facilities of Delaware, Memorial and Wilmington General Hospitals, nursery schools and other appropriate community agencies. Under the supervision of faculty members of the Wilmington Nursing School, psychiatric nursing experience will be obtained at the Delaware State Hospital. Community health nursing experience will be provided through public health nursing associations, nursery schools, and other community agencies. Each of these facilities offers a different type of experience and will contribute to the breadth and depth of the student's knowledge and to her understanding of herself and her patients.

The Nursing School of Wilmington program is being designed to meet the needs of qualified students who wish to prepare themselves in a relatively short period of time for the practice of nursing as registered nurses. In this educational program, repetitive practice will be reduced to a level commensurate to their needs. The hours of instruction will not be based on a forty-hour week but will follow the best educational practices in providing adequate time for study and for clinical and classroom instruction. Graduates will be prepared to give safe nursing care to patients in general hospitals and similar institutions. The program, by preparing more "bedside" nurses in a two-year period of education, will help meet the nursing needs of the community. The graduate will become a contributing member of the nursing team and will receive the salary paid general duty nurses one year sooner than graduates of three-year schools of nursing. Upon graduation they will be eligible for the Delaware Board of Nursing Examinations for licensure as registered nurses.

This program will have many advantages, included among which are:

1. A larger number of applicants can be accepted for admission than was true before and with greater economy in instructional costs;
2. Some of the classes in sciences and in general education can be taught by University of Delaware personnel, thus freeing members of the Nursing School Faculty for a more closely supervised type of clinical instruction;
3. The academic phases of the program are to be geared more nearly to the college level, as is true in an associate degree program;
4. Students will have an opportunity to acquire experience in three major clinical areas instead of one;
5. The year saved by concentrating the nursing education program in two years will increase the number of those who will choose nursing as a career and also place the graduates in service a year earlier than under the present program.

THE CURRICULUM . . .

As architects prepare blue prints and plans in minute detail prior to the construction of a building, so do nursing educators plan the curriculum of their school. In planning a building, the most essential aspect is to insure a solid foundation. The old adage, "a chain is no stronger than its weakest link" can be converted to "a building is no stronger than its foundation," or to "a School of Nursing is no stronger than its curriculum." The success of the graduates of a school of nursing depends heavily upon the program of study and experiences provided by the school for them. Upon this type of foundation the nurse builds.

In the century since Florence Nightingale started the School of Nursing at St. Thomas' Hospital in London, changes have taken place slowly in curricula of Schools of Nursing. In recent years the pace has been stepped up and important improvements have been made in general education. Nursing educators now realize that major advances in nursing education are over-due.

If there were no changes in our society, then an educational program could limit itself to developing those skills and instilling that knowledge which was found sufficient in the past. This would be an idealized situation. Little reason would exist for changing such a curriculum. All schools could use an identical course of study. Obviously this static situation does not describe our society.

Rapid changes are taking place in science, in the medical profession and in allied fields. Improvements are being continuously made in the health program throughout the nation. The nursing profession must keep pace with these advances. Today a nurse is routinely required to perform many acts, treatments and procedures, relatively new to this profession. For this reason, the modern professional nurse must have a thorough grounding in the scientific principles that underlie the practice of these procedures and treatments. At the same time they must have developed the necessary technical competence required to perform such duties.

A professional nurse must be knowledgable about the many new drugs and health-related products that are now used by the physician. Unless the nurse has a clear understanding of such drugs and treatments, harm may come to the patient and to others, including herself.

Although we live in an area of furious change, nearly all of us tend to resist change. Sometimes it seems easier, or indeed better, to continue to do what was done before. Overcoming inertia and moving ahead with the times is precisely what the Nursing School of Wilmington, Inc., is undertaking in upgrading the education of its student nurses. This is not an easy task and the nursing profession is asking for help, cooperation and understanding from organized medicine in the job which lies ahead.

One of the most frequent areas of concern has been the contracting of the educational program, from a three-year to a two-year period. Interested individuals have asked, "What is being deleted or chopped off?" The answer is: "Needless repetition, meaningless experiences and all that cannot be justified in the preparation of today's nurse."

The pace of learning, as well as its level, has been stepped up in the high schools with excellent results. Student nurses today are better prepared to continue at this pace and level and this offers an opportunity for educational economy. In the new School work in science will be strengthened. Communication, such as the use of English, and the social sciences will be strengthened. Greater personal supervision will be given in clinical experiences. Furthermore, a larger student body will enable teachers to concentrate on teaching those subjects in which they are most competent. Instruction will thus be improved.

It is true that something will be lost. Some of the skills will not have received the same amount of practice or repetition that was given them in a three-year program. There will be enough practice, however, to enable the student to do what is needed. It must be said that each of the three hospitals is planning to institute an "in-service" orientation program for these and other newly employed nurses to insure that each possesses an adequacy in the needed skills. This type of orientation work is not new. Hospitals, such as the Massachusetts General Hospital, have used this orientation idea with excellent results. It is a commonplace in industry.

A very careful evaluation of curricula has been made to insure that the basic fundamentals will not be sacrificed merely for the sake of compressing the program into a two-year period. Courses are being planned to be taught on a true laboratory basis. Learning experiences in both theory and practice are carefully selected and correlated to insure that all requisite learning experiences are included. Furthermore, the sequance of material has been orderd to enable a student to learn more rapidly. Previously a student was assigned a fixed period of time to be spent in a particular area whether the amount of time was needed or not. Too frequently the time was determined by service needs rather than by an ducational need. After a great deal of study the faculty is convinced and firmly belives that better and more thorough learning will take place in this new course of study in which all of a student's time is devoted to learning.

It is true that there will continue to be restrictions or minimum standarads imposed on class hours and clinical experience. These are placed on the school by the Delaware Board of Nursing. They serve as a guide for the program, which if fulfilled, will make the graduate of the school eligible for the licensing examination. Upon successfully passing the State Board Test Pool Examination the graduate would then become a Registered Nurse.

A primary goal of the Nursing School of Wilmington in preparing its curriculum is that of producing the very best possible professional nurse and to accomplish it in a two-year period.

CLINICAL NOTICES AND MEETINGS

The Fifth National Cancer Conference will be held September 17-19, 1964 in Philadelphia. Special attention goes to the Saturday morning plenary session during which 5 Nobel Prize winners in medical science will speak on their award winning research.

ADMISSION . . .

Admission to the Nursing School of Wilmington will be granted a person aged 17 years or over, regardless of marital status, sex, race or religion and who is qualified with respect to the additional requirements described below.

The applicant, through letters of reference, must furnish evidence of his or her good character and suitability to enter the nursing profession.

She must have ranked in the upper half, preferably upper third, of her high school class and must have satisfactorily completed the following courses:

English	4 units
Mathematics	2 units
Chemistry	1 unit
Biology	1 unit
Social Studies	2 units
Language	2 units
Elective	4 units

In the exercise of its best judgment, the committees is impowered to accept equivalents for these requirements.

Candidates for enrollment in the school will be required to take the pre-nursing aptitude test of the National League for Nursing with scores in the 60th percentile. They must demonstrate verbal ability. The applicant must be in good mentaal and physical health.

After having satisfied the requirements listed above, candidates will be interviewed personally by members of the Admissions Committee.

COST . . .

Students entering the school in the first class will have to pay $950 (board, room and tuition) for the two-year period of their instruction. Five hundred and fifty dollars will be payable the first year and the remainder the second year. Those who do not live in residence will receive a deduction of $150 per year in lieu of room and board. Students will be expected to pay their own Blue Cross insurance and also for their books and uniforms.

To some this charge may appear to be very high and the increase over the present cost of $600 for a three-year course of study may seem unreasonable. Actually the cost of education for an R.N. varies from $2100 to $2500 throughout the nation. The larger figure applies to Wilmington. In the past too many students have entered nursing schools as a preparation for marriage rather than as a preparation for nursing service. They have had too small an investment in this education. Actually most nursing schools have increased their fees far above the amount to be charged in Wilmington.

Others may conclude that the proposed cost is too low. It must be remembered that this is a new school and that more and better prepared nurses is its goal. For this reason the shift of cost toward the student cannot be accomplished in one year. It cannot be permitted to deny an opportunity to enter to those who otherwise qualify as good candidates yet are barred by the financial outlay demands.

Scholarships and loan funds are being sought to help those who genuinely need financial assistance.

CLINICAL NOTICES AND MEETINGS

The Sixth National Conference on the Medical Aspects of Sports is scheduled for Miami Beach, Florida, November 29, 1964 in conjunction with the Annual Clinical Convention of the AMA.

OUTCOME OF THE NEW NURSE EDUCATION . . .

Predictions concerning the success of graduates of the Nursing School of Wilmington cannot be made and based on statistics because the School is not in operation and furthermore facts concerning this type of program are limited. In two-year schools now in operation in the United States and in Canada, reports on the success of graduates are all favorable.

It is a fact that graduates of this program will have been provided the opportunity to acquire the knowledge and develop the abilities requisite to meet the responsibilities of the beginning nurse practitioner in a hospital setting. Their preparation in general education will have been stronger, for the curriculum has been organized to include the biological, physical and behavioral sciences and the nursing courses that are broad in scope. Such preparation makes the graduate a more resourceful nurse and it does make her eligible for the examination for licensure as a registered nurse.

Perhaps one of the least publicized aspects of the program, and one with the greatest potential, is the number of people who will be eligible for application to the school. The admission policies state that an applicant may be married or single, male or female. The age range is wide and students may live at home for either personal or financial reasons. This widens the field of possible applicants to include many who although interested in nursing could not meet the requirements concerning age and marital status. In these instances, motivation, one of the greatest attributes for success, would be high. Furthermore, many of these people are anchored to Wilmington and do want to engage in local nursing service. This is one example of the anticipated favorable outcome of the program.

Like graduates from any other nursing program, the two-year product will need orientation and in-service education to enable her to adjust to the job situation and to become an effective practitioner.

How successful will the graduate of the two-year program be in practice or what will happen to the present system of educating nurses? There is much optimism current in answering both questions. Too much must not be claimed. A very sane view is that of Ruth Sleeper in an article (July 2, 1964) in the New England Journal of Medicine, in which she presents her unbiased view:

> *"What will happen to the system of educating nurses in the far future cannot now be predicted with any reliability. Pressures from some segments of organized nursing urge rapid movement of educational programs into the college or university as preparation for a professional nurse. Others, including the hospital and nursing-service administrators, urge retention and improvement of the hospital-school plan to safeguard the system that now furnishes, with the two-year junior-college programs, ninety per cent of the practicing registered nurses."*
>
> *"Preparation for the future of nursing education should not be guided alone by sentiment for old patterns, by uninformed enthusiasm for new or by individual group desire for professional status. Nurses now from all three programs want to nurse patients. Their approaches to nursing care will differ as the doctor's approaches to modern medical practice do. Sometimes their care will be given through leadership of others. To nursing educators belongs the responsibility for planning the educational programs that will develop the skills needed in the practitioner of the future."*

CLINICAL NOTICES AND MEETINGS

A Divisional Meeting of the American Psychiatric Association, Area 1, District Branch (Pennsylvania, New Jersey, Delaware and Connecticut) will be held on November 20-21, 1964 at the Bellevue Stratford Hotel in Philadelphia. Papers will be welcomed and should be addressed to H. Keith Fischer, M.D., Greene & Coulter Sts., Phila., Pa.

Delaware Academy of General Practice

DELAWARE ACADEMY OF GENERAL PRACTICE, FALL PROGRAM

The 1964 Fall Course of the Delaware Academy of General Practice will be offered in conjunction with the continuation education program of the Pennsylvania Hospital. A 30-hour review course in internal medicine will be offered on Wednesday afternoons in the Delaware Academy of Medicine from September 16 through November 18. Thirty-hours AAGP Credits have been applied for.

16 September, 1964
"Diverticulosis and Diverticulitis"
Alexander Rush, M.D.
"Management of Carcinoma of the Colon"
Charles H. Cretzmeyer, M.D.
"The Irritable Colon"
Alexander Rush, M.D.

23 September, 1964
"Vertigo"
Frank A. Elliott, M.D.
"Spinal Cord Compression"
Thomas W. Langfitt, M.D.
"Posterior Root Syndrome—Cervical and Lumbar"
Frank A. Elliott, M.D.

30 September, 1964
"Diagnostic Criteria of Hypertension"
Robert J. Gill, M.D.
"Diagnosis and Management of Congestive Failure"
F. Thomas Hopkins, M.D.
"Medical Management of Hypertension"
Robert J. Gill, M.D.

7 October, 1964
"The New Diabetic"
Charles T. Lee, Jr., M.D.
"Diabetic Acidosis"
Guy L. Schless, M.D.
"Oral Antidiabetic Agents"
Charles T. Lee, Jr., M.D.

14 October, 1964
"Hematuria"
John J. Murphy, M.D.
"The Perils of Pyuria"
John J. Murphy, M.D.
"Rational Rx of Prostatism"
Gordon L. Tobias, M.D.

21 October, 1964
"Treatable Anemias"
Edward H. McGehee, M.D.
"Use and Abuse of Transfusions"
A. Reynolds Crane, M.D.
"Resistant Anemias"
Edward H. McGehee, M.D.

28 October, 1964
"Diagnosis and Rx of Early C.V.A."
Henry S. Schutta, M.D.
"Syncope and Seizures"
Frank A. Elliott, M.D.
"Peripheral Neuropathies"
Henry S. Schutta, M.D.

4 November, 1964
"Physiology of Peptic Ulcer"
Edward Raffensperger, M.D.
"Resistent Ulcer"
Rodman B. Finkbiner, M.D.
"Sequalae to Surgery"
Edward Raffensperger, M.D.

11 November, 1964
"Clinical Physiology of Respiration"
Howard N. Baier, M.D.
"Emphysema"
E. Wayne Marshall, M.D.
"Hemoptysis"
Donald J. Ottenberg, M.D.

18 November, 1964
"Acute Myocardial Infarction"
Frank R. Boyer, M.D.
"Anticoagulants"
Thomas F. Hopkins, M.D.
"Complications of Coronary Artery Disease"
Joseph A. Wagner, M.D.

President's Page

ANOTHER YEAR'S CYCLE COMPLETED

The 175th Annual Meeting of the Medical Society of Delaware will be under way in Lewes immediately following the time that this page is in print. This Annual Meeting will terminate a year of responsibility for me as President of your Society. Prior to passing this important work over to my successor I should like to look back and review some of the problems, challenges and trusts that my fellow physicians presented to me. A review of our responsibilities will enable all of us to secure a better vision of what may face us in the immediate years ahead.

Our Medical Society and the community of Delaware has become a dynamic and growing force. Physicians are expected to participate and be an integral part of this forward motion. Successful growth carries with it responsibility and the State Society with its County components must accept its part of the burden. Our Sociey in its structure must assume additional challenges to maintain and provide outstanding leadership. We must render even a greater degree of public service than we have ever done before. Medical care of the best quality and quantity should be assured for our people at a price they can afford to pay. We have an excellent record of implementing suggested programs for the good of the public. Those responsible for our future leadership must never circumvent this responsibility.

May I take this opportunity to express my sincere thanks to my fellow Officers, the various Committee Chairmen and Committeemen and to the staff. I would like to include all of those who have worked hard to implement the many professional and public services which this Society renders. I would also like to express my deep gratitude to those dedicated members of the Women's Auxiliary who have worked long and hard to bring better medical insight to their communities and to improve the medical profession as a whole.

It is with pleasure, recognizing past accomplishments and outlooks for the future that I relinquish the duties of this high offiice to the new President, Dr. Gerald A. Beatty. I know he will continue to lead with the same devotion that he has demonstrated in the past. I will stand ready to assist in every way. The members as well as I should keep in mind the many wonderful people and capable staff who make it possible for the Medical Society of Delaware to provide outstanding service not for itself alone but also for the people of the State.

Floyd I. Hudson

In Brief

Laser Power

Laser's beam of concentrated coherent light energy is showing therapeutic promise in areas ranging from ophthalmology to cardiovascular surgery, states a recent issue of the *New Physician.*. Laser is a device that by a process of supercharged stimulation amplifies light waves. The beam that finally emerges is thin, extremely pure and many times more intense than the sun. Tufts-New England Medical Center reported results of the effect of laser light on human and animal cancers transplanted into laboratory animals. Doctors reported "complete disappearance of the tumors" in two cancer types; in some animals with transplanted melanomas there was no recurrence from 4 to 7 months. In no case was the treatment lethal or permanently damaging to healthy tissue surrounding tumors; the effect on normal tissue is minimal and healing is rapid. Laser energy is being used by ophthalmologists as a photo-coagulation tool to repair detached rentinal tissue. The coagulation is effected in less than a thousandth of a second, which eliminates the need to immobilize the eye. Dermatologists are also finding the laser an interesting experimental tool in skin tumor therapy. Projects now underway include laser's effects on white and red blood cells and leukemic blood, effects on tissue of x-rays, possible uses in heart surgery and an examination of laser's effect on human chromosomes in congenital abnormalities.

Child Care In The Hospital

Hospitalization has been made less traumatic for a child at the Boston Floating Hospital by a unique arrangement which allows the patient's mother to become a "bed-side" member of the hospital care team. She is permitted to live in with the patient in one of four single rooms adjacent to a nursery care area. From 5:00 p.m. to 8:00 a.m., the mother assumes full responsibility for the child, calling the nursing supervisor only if necessary. The mother's constant presence lightens the nurse's load, lowering hospital rates $5 per day for the child. There is no charge for the mother's food or room; the father may replace the mother to give her time off. The children seem less restless, have better appetites and are more content. The project is being closely watched with the hope that it will provide a new approach to better child care in the hospital of the future.

Brief Briefs

- Substitution of enteric coated thyroid tablets for uncoated thyroid tablets has led to relapses of two patients with myxedema, due to impaired absorption of the coated medication. In each case the patient substituted the coated for the prescribed uncoated tablets. *California Med. May, '64*

Pearly Pigments

- Lead pigments, frequently used in the manufacture of artifical pearls or any household article of plastic material with a pearly lustre are to be regarded as potentially hazardous. Lead poisoning resulted from a baby's swallowing some of the synthetic pearls from a necklace she had been chewing. With the use of lead paint severly curtailed in children's furniture and toys, it would appear that another hazard has turned up in the form of pigments in necklaces and other small items. *Pediatrics Digest*, May, 1964; *New York State Journal of Medicine*, June 1, 1964.

Signing of the M.A.A. portion of Kerr-Mills which authorizes and finances implementation of a complete Kerr-Mills program for the aged in Delaware.

Left to right: Lawrence C. Morris, Jr., Executive Secretary, Medical Society of Delaware; Arthur Calvin, Executive Director, Community Services Council; Maurice J. Abraham, Association of Delaware Hospitals; Clifford Foster, Group Hospital Service; Gene Derrickson, Vice-President, Delaware State Labor Council; Governor Elbert N. Carvel; Kathryn Pennypacker, Acting Director, Department of Public Welfare; William O. LaMotte, Jr., M.D., Chairman, Committee on Public Laws, Medical Society of Delaware; Edgar Hare, Jr., Community Services Council; Victor D. Washburn, M.D., Department of Public Welfare.

New Manuals Available

- Advice on keeping families healthy is contained in a booklet published by the American College of Physicians, *Your Physician Looks at Family Health.* Material is based on presentations at a public information forum held by the ACP. Single copies may be obtained without charge from The American College of Physicians, 4200 Pine St., Phila., Pa.
- A State of Delaware Diet Manuel has been prepared by the Delaware Dietetic Association in cooperation with Delaware physicians for the purpose of standardizing diets for use throughout the state. The purpose of the Manuel is to simplify diets and enable physicians who have an opportunity to use it to become familiar with the terminology. Price is $7.00 per copy. Orders should be sent to: Delaware Dietetic Association, c/o Mrs. Donald N. Robinson, 107 Waverly Road, Wilmington.

New Officers

At a reorganization meeting of the State Board of Medical Examiners and the Medical Council of Delaware, the following officers were elected: Andrew M. Gehret, M.D., president-secretary; Norman L. Cannon, M.D., vice-president—for the State Board. Elected by the Medical Council were: The Honorable William Duffy, president; Wallace M. Johnson, M.D., vice-president; Andrew M. Gehret, M.D., secretary-treasurer.

Support For The World Medical Association

Committed to the proposition that medical knowledge should be universally available and free of all political control, the World Medical Association's activities have strengthened arguments against placing medical care under lay government control. Annual meetings are held in various interesting regions of the world. Members of the Medical Society of Delaware who are not presently members of WMA are invited to enroll now. Annual dues are $10, tax exempt. Application blanks may be obtained from the World Medical Association, U.S. Committee, Inc., 10 Columbus Circle, N.Y. *Daniel J. Preston, M.D., Chairman, Membership Committee for Delaware.*

New Fund Drive

A fund drive, via letter, to raise money for research and education, dealing with diabetes, has been conducted by the Delaware Diabetes Association. Business firms, professional personnel, foundations and the general public were canvassed. As of July 14, the total amount received was $989 of a $1000 goal. A foundation which asked to remain anonymous boosted the total to $1490 as of July 23rd. The Association feels its first attempt at a fund drive was successful.

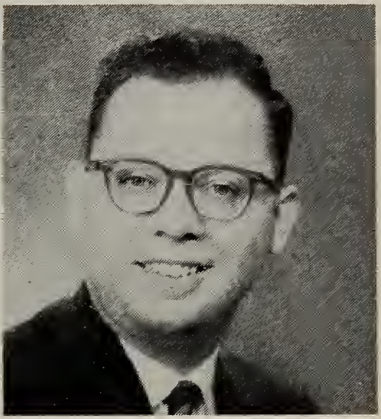
Grant To Governor Bacon Health Center

A three-year hospital improvement project grant was awarded to the Governor Bacon Health Center through the National Institute of Mental Health and the Department of HEW for use in the Psychiatric Division for Children and Adolescents, starting July 1, 1964. The detailed plans presented and approved will expand and modernize the psychiatric hospital facilities to include: structural changes in the first floor of Tilton Building; 16 added personnel, including one physician, 2 registered nurses and 9 psychiatric aides; an electroencephalograph and other modern equipment for the study and treatment program. A remodeling program will increase the present 15 child-capacity to 46. George E. Voegele, M.D., Superintendent, is Project Director and Albrecht Kaendler, M.D., is Co-director.

Continuation Education Program

For three years the Pennsylvania Academy of General Practice and the Continuation Education Program of the Pennsylvania Hospital have collaborated in presenting a week-long obstetrical review course. This year the course will be from September 21 to 26 at the Pennsylvania Hospital. Last year this collaborative project gained the added sponsorship of the Pennsylvania section of the American College of Obstetricians and Gynecologists. The faculty comprises the staff of the Philadelphia Lying-In Hospital, now the Division of Obstetrics and Gynecology of the Pennsylvania Hospital. Distinguished guest faculty from the Philadelphia medical schools contribute in special areas. This is an opportunity to hear leaders in the specialty of obstetrics, to discuss critical problems with them and to sharpen your thinking and your practice against their standards of practice and their continuing search for new and better obstetrical concepts and measures. A registration fee of $10 will reserve a place in the course and a hotel room if desired. The remainder of the $60 tuition fee is due at matriculation. Registration checks should be addressed to: Pennsylvania Hospital and sent to Fred MacD. Richardson, M.D., Coordinator, The Pennsylvania Hospital, 8th and Spruce Sts.

New Members



Thomas S. Vates, Jr., M.D., University of Pittsburgh, '55, is a native of that city. Delaware license: 1963; Specialty: Neurology; Office: Professional Building, Wilmington. Dr. Vates and his wife Mary Ann have a 15-months-old son. The doctor's special interest in leisure hours is photography.

John S. Piendak, M.D., St. Louis University, '55, is a Wilmingtonian and obtained his Delaware license in 1956. Specialty: Radiology, Office: 327 East Main Street, Newark, Delaware and the Professional Building, Wilmington. Dr. Piendak has two children and likes to relax with a golf club or a fishing rod.

Charles L. Reese, III, M.D., Jefferson Medical College, '58, was born in Philadelphia. Delaware license: 1962; Specialty: Neurology; Office, Professional Building, Wilmington. Dr. Reese has two sons and makes a point of going horse-back riding every morning for exercise.

Gordon J. Stopps, M.D., London Hospital Medical School, '50, was born in London and is an Associate Member. License: Canada, 1956; Specialty: Industrial Medicine; Office: Haskell Laboratory, Newark, Delaware. Dr. Stopps has three daughters, ages 8, 6 and 4. His hobbies are the local history of Pennsylvania and gardening.

Robert B. Flinn, M.D., Johns Hopkins University, '56, is a native Wilmingtonian. License: Delaware, 1963; Specialty: Internal Medicine (consultation only); Office: Delaware Hospital, Director of Medical Education. There are two children in the family.

ERRATA: April, 1964 issue, page 85
Under George R. Hilty, M.D., the *Specialty* should have read *Pediatrics*, not Neurology.

Auxiliary Affairs

REPORT OF THE SECOND ANNUAL WORKSHOP

A workshop meeting was held at the Academy of Medicine, April 13, 1964 for the purpose of emphasizing the interdependence of County, State and National policies and programming.

The session was opened at 10:00 a.m. by Mrs. Douglas M. Gay, chairman of the day, who then called upon Mrs. Oscar N. Stern to introduce the guest speaker, Miss Rita Coll, Director of the Wilmington Nursing School, Inc. Miss Coll discussed the unique two-year hospital controlled program under way here in Wilmington. The program of this school is designed to meet the needs of qualified young men and women, who wish to prepare themselves in a relatively shorter period of time as registered nurses. Graduates of this school, who are at least twenty years of age are eligible for the Delaware Board of Nursing examinations for licensure as registered nurses.

Mrs. Lemuel C. McGee, a member of the Delaware Medical Auxiliary, and also a Director of the National Auxiliary spoke on the subject of programming in general to stimulate the interest and attendance of *all* members. Mrs. McGee stated that all activities of the Auxiliary should be correlated, each phase of activity should assume a challenging responsibility not only in its own interest, but also in the interest of all other activities planned for the year and continued for future years.

The attending members then divided into three discussion groups: Health Careers, led by Mrs. Oscar N. Stren; Legislation by Mr. Lawrence C. Morris, Jr.; and Organization, by Mrs. John W. Alden.

Health Careers—Mrs. Stern explained the duties and function of this committee which is involved with the evaluation and selection of candidates for financial aid and help with tuition costs in schools of nursing and medical technology in Delaware. This financial aid is supplied by the Woman's Auxiliary, the Rotary Club and other interested service clubs. To stimulate interest in health careers, the committee seeks the assistance of high school guidance counselors, directors of schools of nursing and all other interested personnel. Women on this vital Health Careers committee also suggest guest speakers for high schools and other interested groups.

Legislation—Mr. Morris alerted the members present to the health bills pending in Delaware, and also the bills pending in Committee in Washington to be brought to the Senate floor and voted upon.

He suggested that each of us learn about the benefits to Delawareans from the Kerr-Mills law, which enables the state to provide a wide range of health care benefits for all people over 65 who need help. He emphasized again the importance of the defeat of the King-Anderson bill which could be accomplished by letters to Washington in such volume that they could not be ignored. This project is underway throughout the United States.

Organization—Mrs. John W. Alden compared the organization of the Woman's Auxiliary to that of the United States Government. Each section depends on the other and functions by a system of checks and balances. The roots of our tree of organization are like the legislative department of the government, formed by the individual members, who, in the case of counties and states send their delegates (senators and legislators) to the State and National conventions. These delegates are the policy-makers for the Auxiliary. The lower branches of the tree are in each case (National, State and County levels) the executive department of our Auxiliary. Here, as in our Government, we find the president, and elected officers, and the chairmen of various committees. The top section of this tree is the judicial division, made up of the board of directors and the advisory committee of doctors.

This tree could not exist without its roots, the individual Auxiliary members, as our Government exists for and is dependent upon its individual citizens.

Catherine M. Gay, Chairman
Workshop Program 1963-1964

Delaware Medical Journal

SEPTEMBER, 1964
VOLUME 36
NUMBER 9

CLEFT PALATE-ORTHODONTIC PROGRAM,

State of Delaware 1951-1963

• A review of the Cleft Palate-Orthodontic Program in the State of Delaware in the past twelve years outlining the type, distribution, therapy, and disposition of cases seen.

Jack C. Fisher, M.S.
A. Yvonne Russell, Ph.D., M.D.

Cleft palate and cleft lip may occur in one in each 600 births.[1] It has been possible to produce cleft palates experimentally in animals by depriving the mothers of riboflavin. However, most authorities feel that the failure of the embryonic structures to unite is due to some characteristic carried by the genes. This genetic factor is probably recessive and its operation is not well understood. Eleven per cent of all cleft palate children may have similar defects in their immediate families.[2] The parent with a cleft palate has one chance in 50 of having a child with a cleft.[3] On a per capita basis, more Caucasians than Negroes and more males than females are born with clefts.[4]

Cleft palate and cleft lip have profound consequences, both on the child and his family. Facial and palatal clefts destroy facial symmetry and arrest development of the bony structures of the face and surrounding tissue. A cleft palate may disrupt and distort the placement of tooth buds which then erupt into a misshapen maxillary arch. Communication may be severely distorted by hypernasality and poor articulation, which may be due to a short or absent palate, palatal perforation and/or severe anterior dental malocclusion. Early infancy feeding problems, otological problems, and psychological disturbances often occur in children with cleft lip and cleft palate. It is exceedingly difficult for an individual medical specialist to provide for the total needs of a patient with cleft lip and cleft palate. The necessary medical and therapeutic services may be extremely costly in time and money. A team approach to the habilitation of children with cleft lip and cleft palate has been widely adopted in order to provide a unified and coordinated approach to evaluation and therapy.

Background

The Cleft Palate-Orthodontic Program in Delaware started in September, 1951, as a result of orthodontists' interest in developing a program for dental malocclusions. The development of the program has been described and a four-year progress report given.[5,6] Al-

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Mr. Fisher is Coordinator of Speech and Hearing Services, Division of Crippled Children's Services; Dr. Russell is Director, Division of Crippled Children's Services, Delaware State Board of Health.

TABLE I

205 Children Seen in Cleft Palate-Orthodontic Clinic 1951-1963

Condition Referred		**Source of Referral**		**Area of Referral**		**Race**		**Sex**	
Cleft lip only	9	Physician	91	New Castle Co. exclud. Wilm.	86	White	177	Male	108
Cleft palate only	64	Speech Therapist	36	Wilmington	45	Negro	26	Female	97
Cleft lip and palate	67	Public Health Nurse	21	Kent County	43	Other	2		
Velpharyngeal incompetency	8	School Nurse	19	Sussex County	31				
Orthodontic problem	57	Dentist	18						
		Family	13						
		Other	7						

though the Program was limited initially to children with cleft lip and cleft palate, a child has also been accepted if he has had velopharyngeal incompetence or he has had an orthodontic problem which caused a speech defect. A child is eligible for diagnosis, evaluation and therapy from birth to age 21 years.

Structure

The Cleft Palate-Orthodontic Program holds a clinic at the Alfred I. duPont Institute on the third Tuesday of each month to evaluate those children who are new and re-evaluate children previously seen. The clinic is attended by plastic surgeons in private practice, who are consultants to the A. I. duPont Institute, orthodontists in private practice, volunteers from the American Red Cross, and the following staff from the Board of Health: the Director of Crippled Children's Services who is the pediatrician in the clinic, the Coordinator of Speech and Hearing Services and other speech therapists, the Chief Medical Social Consultant and other medical social workers, nutritionists, and public health nurses. The principal objective is to provide the best possible habilitation of any child in Delaware with cleft lip and cleft palate, velopharyngeal incompetence, or an orthodontic problem causing a speech defect. Each child is examined separately by the pediatrician, plastic surgeons, orthodontists, and speech therapists. A child may be seen initially for diagnosis, evaluation, and team recommendations regardless of ability to pay. The cost of surgery, orthodontia, or other treatment recommended by the clinic team may be paid for in full or in part by the families. In those cases in which the family is unable to pay, surgery is provided at the A. I. duPont Institute and payment of other cost provided for by Crippled Children's Services.

Crippled Children's Services assumes the responsibility for scheduling patients, conveying clinic recommendations to parents, recording of clinic recommendations and forwarding reports to family physicians, dentists, etc., and for follow-up of all recommendations. Pedodontic care and speech appliances may be provided as indicated. Each child is referred back to his family dentist for pedodontic care except where there is no family dentist, in which case a dentist is selected by Crippled Children's Services. Orthodontic treatment is conducted in the office of the orthodontist assuming responsibility for the child.

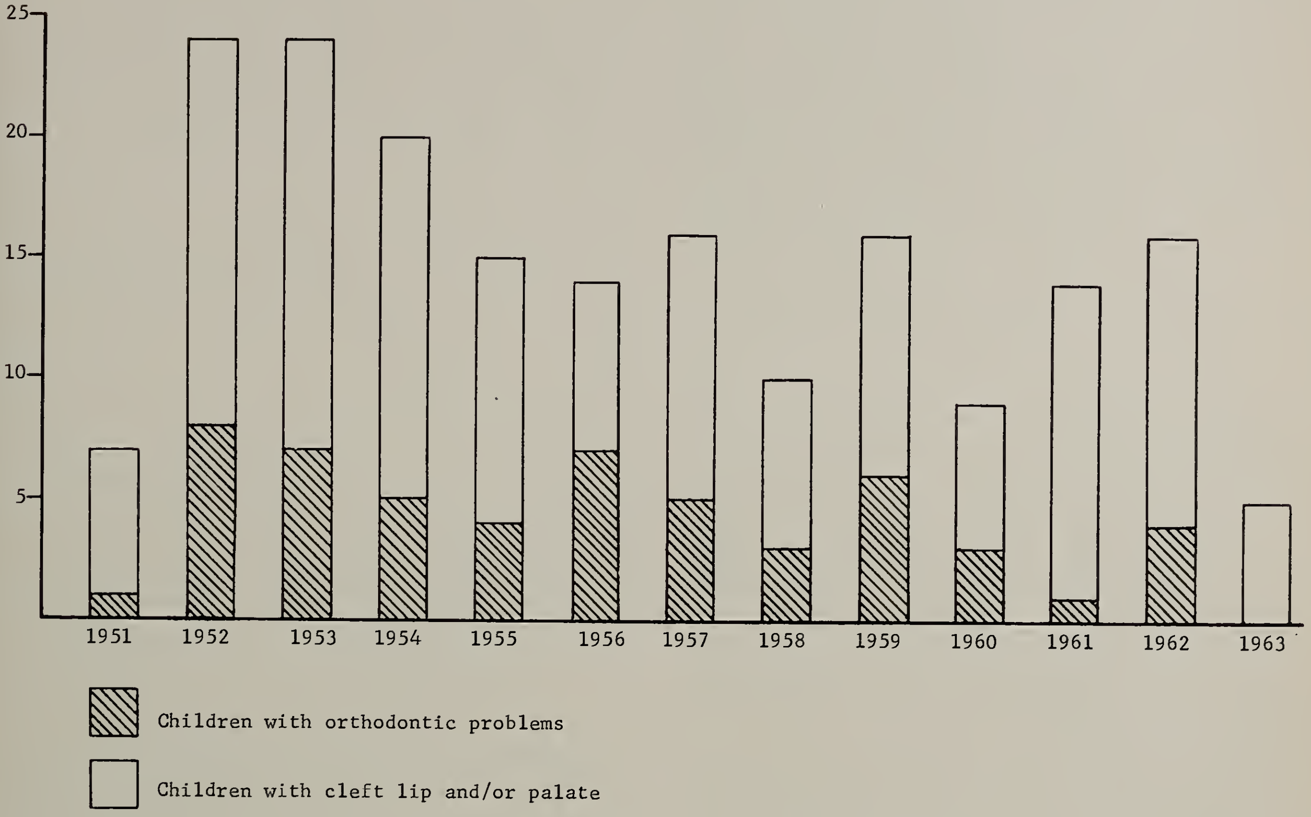
Each child is recalled within a one to two year period. Eight to ten children are scheduled per clinic session currently. Four children may be new cases ;the others are return visits for follow-up study.

Summary Of Services

There have been 205 individual children seen for diagnosis and evaluation in the Cleft Palate-Orthondontic Clinic in the past twelve years (Table I). Of these, 140 children have had cleft lip and/or cleft palate, eight have had velopharyngeal incompetence, and the remaining 57 children have had orthodontic problems. In tabulating and discussing these children, those with velopharyngeal incom-

Figure 1

205 Children Referred to Cleft Palate-Orthodontic Clinic 1951-1963*



*Twelve children with cleft lip and/or palate and three children with orthodontic problems were referred before 1951.

petence are included with the cleft lip and cleft palate children since velopharyngeal incompetence may have the same physiologic effect as a postsurgical cleft palate.

Figure 1 illustrates the number of new children referred in each year of the program. Prior to 1951 there were referrals of three children with orthodontic problems and twelve children with cleft lip and cleft palate. Almost half of the new referrals occurred in the first four years of the Program.[6] Although there have been fewer new cases referred in the last eight years of the Program, the total number of children seen in each clinic has markedly increased due to the necessary follow-up visits. Initially there were two or three patients seen at each clinic. Currently there are eight to ten children.

Children have been accepted from all parts of the State. All except four children referred with cleft lip and cleft palate have had continuing follow-up by the clinic. After full evaluation of the children referred with orthodontic problems, 20 of these children have been deemed either not to have speech defects caused by orthodontic problems or not to need therapy, and therefore these children have received only an initial evaluation.

Of the 140 children having cleft lip and/or cleft palate, 105 children were born in Delaware, the remainder born out of state. The 40 children with cleft lip and/or cleft palate who were born in Delaware in the past ten year period, 1954 through 1963, represent an incidence of one per 2,800 live births. However, this is undoubtedly not a true incidence.

Parents of the children with cleft lip and palate seen in the Program have stated that in many cases birth certificates do not carry these defects noted at birth. In addition, there are twelve children with cleft lip and palate known to live in Delaware who are not being followed through the Program.

More Caucasians than Negroes and more males than females have been born with cleft lip and/or palate in Delaware, as reported elsewhere.[4] It should be pointed out that the number of children per population referred from Kent County is unnaturally high, but may be explained by referrals from the transient population of Dover Air Force Base.

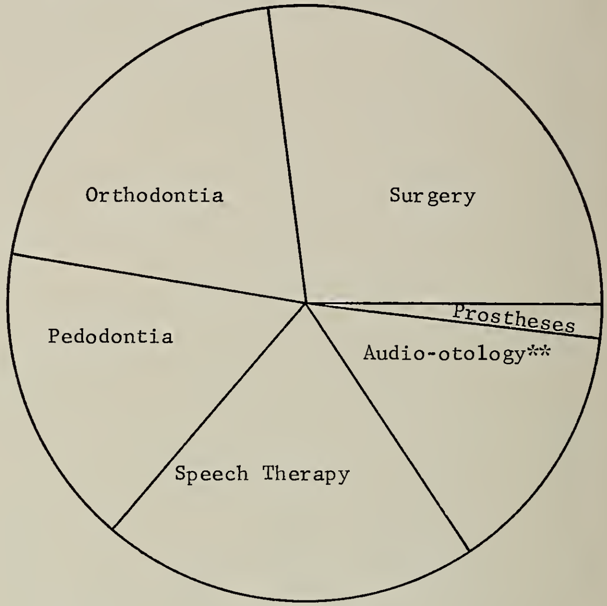
In the twelve year period of the Cleft Palate-Orthodontic Program there have been 596 procedures of all types including surgery, speech therapy, etc., for 144 children with cleft lip, cleft palate, and velopharyngeal incompetence. Figure 2 illustrates the proportion of these 596 procedures. There is no therapy included in Figure 2 for the four children who were seen for consultation only. A child may have had any or all types of the therapy illustrated.

The majority of therapy for children with cleft lip and palate has been surgical procedures. Fifty-nine per cent of the surgery has been performed by the plastic surgeon consultants at the A. I. duPont Institute. Twenty-seven per cent of the surgery has been arranged for on a private basis and the cost assumed by the patients' families. Fourteen per cent of the surgery performed has been financed by other private or public agencies.

A large proportion of therapy for children with cleft lip and palate has been devoted to orthodontia as shown in Figure 2. Orthodontia has been arranged for on a private basis and the cost paid for by the families in 15% of the cases. The cost has been shared between the families and Crippled Children's Services in 10% of the cases. Crippled Children's Services have provided for the cost of orthodontia in 71% of the cases. In 4% of the cases, the cost has been assumed by other private or public agencies.

Figure 2

Therapy of 144 Children with Cleft Lip and/or Cleft Palate 1951-1963*



*Four Children were seen in consultation only and did not receive therapy

**Audiologic and/or Otologic diagnosis and treatment

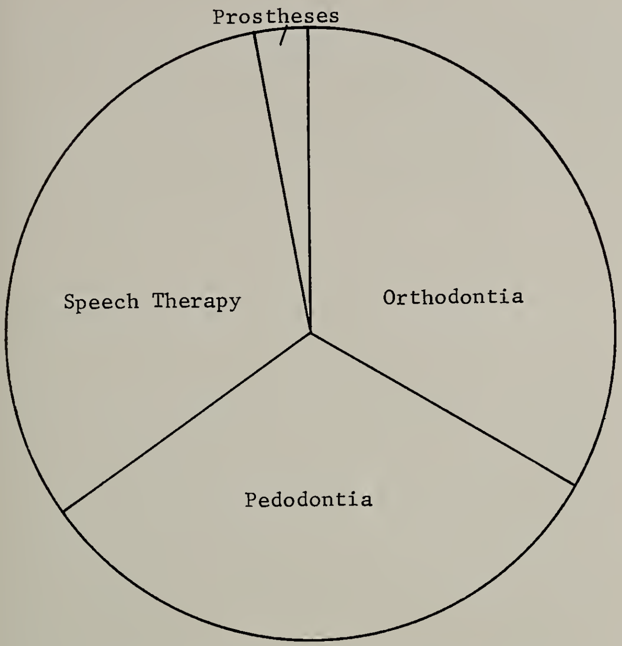
Children with cleft lip and palate have required and received pedodontic care as illustrated in Figure 2. Pedodontic care was arranged for on a private basis with their own dentists and the cost paid for by the families in 37% of the cases. The families and Crippled Children's Services shared the cost of pedodontia in 4% of the cases. Crippled Children's Services provided for the cost of pedodontia in 51% of the cases. In 8% of the cases, pedodontic care was paid for by other private or public agencies.

Many of the children seen with cleft lip and palate or orthodontic problems causing speech defects have been too young for consideration of orthodontic treatment but will become candidates for corrective treatment at a later date.

There have been 75 procedures including orthodontia, speech therapy, etc., for 37 children with orthodontic problems causing speech defects, 1951-1963. Figure 3 illustrates the proportion of these 75 procedures. There is no therapy included in Figure 3 for

Figure 3

Therapy of 37* Children with Orthodontic Problems Causing Speech Defects, 1951-1963



*Twenty children were seen in consultation only and did not receive therapy

20 children who were seen for consultation only. A child may have had one or all types of the therapy illustrated.

Almost one-third of the therapy for children with orthodontic problems causing speech defects was orthodontic treatment as shown in Figure 3. The families assumed the responsibility for arrangement and payment for private care in 4% of the cases who received orthodontic survey and treatment. Families and Crippled Children's Services shared orthodontic survey and treatment costs in 32% of the cases. Crippled Children's Services assumed the cost of orthodontic survey and treatment in 64% of the cases.

Pedodontic care was also necessary for children with orthodontic problems causing speech defects as shown in Figure 3. Pedodontic care was arranged and financially provided for by the families for these children in 31% of the cases. Pedodontic costs were assumed by Crippled Children's Services in 46% of the cases. Pedodontia was provided by other private or public agencies in 23% of the cases.

As illustrated in both Figures 2 and 3, speech therapy was necessary for children with cleft lip and palate and also those children with orthodontic problems causing speech defects. Speech therapy was provided either by the speech therapists of the Wilmington Public Schools or the Department of Public Instruction or therapists from Speech and Hearing Services of Crippled Children's Services.

Audiologic and otologic consultation and treatment as shown in Figure 2 were obtained for children with cleft lip and palate both privately and through Crippled Children's Services. These children were seen through the Hearing Conservation Program for audiologic and otologic consultation and treatment when it was necessary that the cost be assumed by Crippled Children's Services.[7]

At the end of December, 1963, 92 of the cleft palate cases and seven of the dental malocclusion cases were still under active treatment. Treatment of 56 cleft palate cases and 50 dental malocclusion cases had been completed or the cases closed. Table 2 lists the reasons cases have been closed. Of the 21 cases closed due to lack of interest, there were fifteen orthodontic cases closed for this reason, whereas only six children with cleft lip and palate were no longer included in the Program for this reason. It should be further noted that these six children had spent several years in the Program and had received considerable services before their cases were closed.

TABLE II

106 Cases Closed In Cleft Palate-Orthodontic Clinic 1951-1963

Reason Case Closed	*No. of Cases*
Treatment Completed	29
Initial Consultation Only	24
Moved Out of State	23
Lack of Interest	21
Under Private Treatment	8
Deceased*	1

*Due to unrelated illness

(*Continued on Page 196*)

CHRONIC RESPIRATORY DISEASE PROGRAM,

Emily P. Bissell Hospital*

• **This program, now well established, provides a needed service to medically indigent patients at the same time releasing general beds for more acutely ill patients. Delaware was a pioneer in this type program which is now being establised all over the country.**

Nathaniel Young, M.D.

Specialty hospitals, known as sanatoria, were established throughout the United States during the first half of this century. The purpose of these santoria was the isolation and treatment of pulmonary tuberculosis, and altitude and fresh air were the mainstays of therapy. By the Thirties pneumonotherapy or other collapse therapy was well established, but it was in mid-century that a real breakthrough occurred with the discovery of anti-tuberculosis drugs. The character of sanatoria rapidly changed at this time because of the use of these drugs, but also because of increasing awareness of non-tuberculous diseases of the lung. Better laboratory methods helped in the separation of such diseases as sarcoidosis and histoplasmosis, and even malignancies, masquerading as infections, to name a few. The widespread use of biopsy or surgery helped to confirm or refute these diagnoses.

With drug treatment and surgery, the outlook for patients with pulmonary tuberculosis changed remarkably, but some patients who were left without active tuberculosis had equally crippling residua such as pulmonary fibrosis and emphysema. At the same time the amount of incapacity caused by chronic chest disease other than tuberculosis came to the fore, and with this knowledge, the need for early diagnosis and treatment was apparent.

A great deal of thought was given to this matter in Delaware as elsewhere. A survey was made of the number of patients with chronic chest diseases being treated in general hospitals in the state. It was found that there were about 600 such admissions a year, and that, not only was this chronic hospitalization financially unsound for the general hospitals, but beds were not being put to their best use. With the support of the Delaware Antituberculosis Society, the medical professions and hospital administrators, the State Board of Health sought legislation, permitting a chronic respiratory disease program. Legislation was enacted in 1957 authorizing the Emily P. Bissell Hospital to admit patients with chronic pulmonary diseases. The State Board of Health stipulated that to be admitted to Bissell, patients should be medically indigent, and that their disease should be amenable to treatment. Is is to be noted that patients are not necessarily "indigent," but "medically indigent," mainly as a result of the disease requiring hospitalization. In order to exclude terminally ill patients, the words "amenable to treatment" are used.

There was a liberal interpretation of what constituted such conditions, as can be seen from the partial list of diseases treated in 1963. To secure admission, the patient's private physicians should contact the Director of Medical Services at Emily P. Bissell Hospital. Most applications are received by telephone, but forms are available for the purpose. In many cases a tentative diagnosis only is made prior to admission. The necessary investigation is undertaken, including pulmonary function studies, bronchocopy, lung biopsy, etcetera. Some studies cannot be carried out without the use of general hospitals and consultant staff, which are readily available and are liberally used. Two chest surgeons regularly attend the weekly staff conference at Bissell. Forty two beds have been allocated to the Chronic Respiratory Disease Program.

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*In 1957 the State Board of Health authorized the Emily P. Bissell Hospital to admit for study and treatment, patients with chronic respiratory disease other than tuberculosis.

Dr. Young is Director of Medical Services, Emily P. Bissell Hospital, Wilmington.

In 1963 one hundred and twenty-eight patients were admitted. Of these, about fifty-percent had a diagnosis of emphysema, chronic bronchitis, or asthma. In over ten percent of patients bronchogenic carcinoma was found, and often confirmed by exploratory thoractomy, with excision when feasible. Another ten percent had chronic pneumonia, with or without lung abcess. Fungous disease constituted a small but interesting group, and included histoplasmosis, aspergillosis, cryptococcosis and farmer's lung. The collagen diseases were represented by dissemenated lupus erthematosis and Goodpasture's syndrome.

Among the pulmonary fibroses or pneumoconoses was one case of asbestosis, proven by lung biopsy. There was one young patient, 8 years of age, who had a large congenital cyst, excised.

In some cases very definitive treatment such as surgical excision was possible but in many patients treatment was only palliative. The immediate problem in many admissions was congestive heart failure, with varying degrees of CO_2 retention. Once these patients had made a sufficient recovery, many were helped by atteding sessions for intermittent positive pressure breathing, and breathing exercise classes. These latter are conducted by a physiotherapist who teaches patients how to make the best use of their respiratory muscles and accessory resipratory muscles. This is therapy which the patient himself can use, at no cost, at any time. Many patients require the continued use of various combinations of digitalis, diuretics, bronchodilators and occasionally antibiotics after discharge, and in this medically indigent group this is a problem.

If the patient cannot purchase drugs he is liable to revert to his preadmission status. For this reason, after investigation by our Social Service Department, patients who cannot purchase drugs are provided with supplies monthly. The patient attends the local health unit, and is seen by the clinician, who determines if the continued use of drugs is necessary, or if there is a need for a change in drugs or dosage. There is no intention of providing medication except to medically indigent patients, and every effort is made to ensure that this is so.

In conclusion, a service is available at Emily P. Bissell Hospital for the study and treatment of Chronic Respiratory Disease other than tuberculosis, in addition to that for tuberculosis. Admission is at the request of the patient's family physician. The local Health Unit is also available for x-ray examinations, and follow up after discharge from the hospital.

It is our intent that the patient remain under the care of his private physician and that the latter use our facilities as he deems necessary.

CLINICAL NOTICES AND MEETINGS

Members of this Society and their guests have been cordially invited to attend the 114th Annual Session of the Pennsylvania Medical Society, to be held in the Bellevue Stratford Hotel, Philadelphia from October 13 to October 16, 1964.

DIETARY TREATMENT OF PHENYLKETONURIA

• **The mental retardation resulting from phenylketonuria can be prevented by dietary treatment if instituted in early infancy.**

Mayton Zickefoose, M.S.
Patricia W. Frey, B.S.

Phenylketonuria, more frequently known as PKU is an inborn error of metabolism in which the essential amino acid phenylalanine is not properly utilized by the body. In the PKU child there is a blockage in the normal metabolic pathway of phenylalanine; this results in the accumulation of abnormal levels of the amino acid in the blood and urine. The excess in the urine is excreted as phenylpyruvic acid, a ketone; hence, the name phenylketonuria. One of the major clinical characteristics of uncontrolled PKU is severe mental retardation; the abnormally high levels of circulating phenylalanine or its metabolites are considered the primary cause of mental retardation. Other characteristics of uncontrolled PKU include hyperactive behavior, convulsive disorders, eczema and a lightening of hair and skin.

Research has indicated that establishment of a low-phenylalanine diet within the first month of life will prevent mental retardation in the PKU child. Even children in which the disease was diagnosed too late to prevent mental retardation show considerable improvement in behavior patterns when a low-phenylalanine diet is followed.

Delaware is one of several states which are participating in an effort to screen all newborns for this disease. The Guthrie bio-assay test is being used in the screening technique.

Prescription And Calculation Of The Diet

The normal blood level of phenylalanine is 1-3 mg./100 ml. serum; in the PKU child the level is often ten or more times above the normal. When a low-phenylalanine diet is established the level is maintained between 2-6 mg./100 ml. serum. The child's physician prescribes the amount of phenylalanine needed for growth without danger of toxicity. This amount may vary from 10-25 mg./pound body weight/day depending upon the individual child and his age. A diet regimen based on this calculated amount of phenylalanine and which maintains the desired level of serum phenylalanine is then tailored to the child's needs.

Because it is impossible to obtain enough protein for growth from natural foods without getting a toxic amount of phenylalanine, the PKU diet must include a synthetic food product. Two such products are Ketonil, manufactured by Merck, Sharp and Dohme, and Lofenalac from Mead Johnson and Co. Ketonil consists only of an amino acid mixture; while Lofenalac is a complete formula with fat, carbohydrates and certain vitamins and minerals added. Lofenalac is low in Vitamin C content. The normal dilution of Lofenalac supplies 20 calories per ounce. Both commercial products have proved satisfactory in preventing mental retardation; however, most physicians to date have prescribed Lofenalac as the basic food source for the low-phenylalanine diet

The components of the low phenylalanine diet must include: 1) low phenylalanine basal mix; 2) natural foods to yield required amount of phenylalanine; 3) iron supplements; 4) multi-vitamin supplement, as required; 5) sufficient fluid. The amount of

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Mayton Zickefoose, Nutrition Consultant, Delaware State Board of Health, Dover, Delaware. Patricia W. Frey, Nutritionist, Delaware State Board of Health, Dover, Delaware.

SOME EXAMPLES OF LOW PHENYLALANINE MENUS

Age and weight	Formula	Breakfast	Midmorning	Dinner	Midafternoon	Supper	Bedtime
2 months (10 lbs.)	15 measures Lofenalac 2 oz. milk 26 oz. water	Five or six 5-6 ounce feeding of formula					
8 months (18 lbs.)	22 measures Lofenalac 2 oz. milk 25 oz. water	½ cup chopped peaches 8 oz. formula		½ cup chopped carrots 8 oz. formula		½ cup chopped pears 8 oz. formula	8 oz. formula
2 yrs. (26 lbs.)	26 measures Lofenalac 1 oz. milk 20 oz. water	½ cup dried rice cereal* with 3 oz. formula with sugar 1/3 cup orange sections 6 oz. formula		½ cup cooked carrots 2½ tbsp. mashed potato made with formula and 1 tsp. butter ½ cup apple sauce 6 oz. formula	2 animal cookies 6 oz. formula	3 tbsp. of green beans 3 pear halves 6 oz. formula	
4 yrs. (36 lbs.)	27 measures Lofenalac 25 oz. water	½ cup dried rice cereal* with 2-3 oz. formula 1 small orange 8 oz. formula	wedges of apple	½ cup cabbage and carrot salad with vinegar and oil dressing ½ cup homemade vegetable soup 1 peach half 8 oz. formula	3 animal cookies 4 oz. formula	½ banana ½ cup tapioca pudding made with pineapple juice 8 oz. formula	Synthetic fruit flavored drink

1 measure=1 tablespoon
16 tablespoons=1 cup
* Do not use any "protein fortified" cereals.

Taken from: Phenylketonuria, Children's Bureau Publication #388. 1961. Department of Health, Education and Welfare.

phenylalanine in the synthetic formula is so low that it is necessary to supplement the formula with small quantities of additional proteins from natural foods in order to maintain normal growth.

Exchange Lists

Exchange lists have been developed which simplify the low-phenylalanine diet for the family and for the physician. These lists are similar to the diabetic exchange lists in that foods of similar phenylalanine content are listed together and can be exchanged one for the other within a list to give variety to the diet.

There are eight exchange lists including: Lofenalac, vegetables, fruits, breads, fats, desserts, free foods (low in phenylalanine) and foods to avoid (high in phenylalanine). Recipes have been developed to help the family incorporate the Lofenalac and vary the diet somewhat.

Meal Guide

The physician should provide the child's parents with a meal guide indicating the number of servings that the child should have from each exchange for the various meals of the day. While the child needs enough food to grow and develop at the normal rate, the mother should be warned against force-feeding. All children (and adults) have variations in appetite. The meal plan spares the mother the tedious task of counting the milligrams of phenylalanine and the physician is better assured that the child is getting the prescribed amount of phenylalanine.

Suggestions For Dietary Management

The physician and his team must show continued interest in the patient and his family long after the diagnosis of PKU is made. At present we do not know how long the low-phenylalanine diet must be continued. Findings indicate that the diet, if begun by four weeks of age, may be discontinued at four years of age without fear of mental retardation. Most physicians would continue the dietary regime for a longer period to provide a margin of safety.

From the very onset of the disease, the family must thoroughly understand the illness and the overall plan of treatment. Parents should realize that adherence to the low-phenylalanine diet will be difficult from a psychological standpoint. They will naturally feel they are depriving the child of normal foods. This is all the more reason they should understand that following the diet is the only means of preventing mental retardation.

The PKU child should be treated as nearly as possible like the well child in all respects, except dietary ones. Introduction of solid foods should follow the pattern of a well child.

Because following a low-phenylalanine diet may cause an economic strain on the family, the physician should familiarize himself with community resources that might help ease the expense. The diet (Lofenalac* and natural foods) may cost between $.75 and $2.00 per day depending on the age and size of the child.

Summary

Phenylketonuria (PKU) is a disease identified as an inborn error of metabolism. An essential amino acid, phenylalanine, is not properly utilized by the body. The most striking clinical manifiestation is severe mental deficiency.

Early diagnosis, within the first month of life, and adherence to a low-phenylalanine diet will prevent mental retardation. This diet can be obtained through the use of a special formula and practically protein-free foods. Menu suggestions and exchange lists of foods for low-phenylalanine diets are available.

Confidence and cooperation, essential ingredients in long-term dietary management of phenylketonuria, depend to a great extent on the adequacy of parental instruction and favorable initiation of the child.

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*Lofenalac in a 2½-pound can costs approximately $8.10.

CLEFT PALATE-ORTHODONTIC PROGRAM

(*Continued from Page 191*)

Summary

The clinic team of the Cleft Palate-Orthodontic Program provides diagnosis and evaluation for any child in Delaware with cleft lip and/or cleft palate, velopharyngeal incompetence, or an orthodontic problem causing a speech defect. There have been 205 individual children seen for consultation and evaluation in this Program, 1951-1963. Joint recommendations for treatment have been made by the clinic team. Therapy has been provided as needed for 181 children. The Program is particularly valuable because it offers a unified and coordinated approach to evaluation and therapy.

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ARE PREMARITAL EXAMINATION LAWS EFFECTIVE?

(*Continued from Page 199*)

one element of a complete screening examination for marriage but in practice the examination often consists only of the collection of the blood sample. In weighing the merits of any law then, one must be realistic and adjuge it upon the basis of what it does accomplish and not what it theoretically should produce. This study should determine whether this type of approach to syphilis detection is worthy of continued requirement by law.

A CHAIN OF INFECTIOUS SYPHILIS IN NORTHERN DELAWARE

• Twenty-six cases of infectious syphilis have been traced to a single resident of another state who exposed a number of persons within a short period of time. Several of these persons consulted physicians at the time they had clinical manifestations but the disease was either not suspected or not recognized.

Winder L. Porter, M.D.

Resurgence in cases of infectious syphilis in the United States has been noted progressively since 1955. Actually, Delaware noted this resurgence before it was reported nationally, experienced decline for a couple of years to be followed by a new wave which currently carries the rate back beyond that for the U.S. as a whole.

There is a striking contrast between the two waves. The original group consisted largely of persons who merely happened to be in Delaware at the time their disease was discovered—in race track personnel, in agricultural migrants and persons temporarily detained in one of the penal institutions. Often these persons had not exposed themselves in Delaware and were most frustrating to follow epidemiologically as their tracks were so tortuous both before entering the state and, also, after departure. Now we see pockets of epidemic spread among the native population. Let me cite an example:

In August of 1962, word was received from an adjoining state that a patient under treatment for infectious syphilis there had spent some time in Delaware and had numerous exposures while here. Inasmuch as she at times had entertained several persons in succession, it was deemed inadvisable to treat epidemiologically but that rather this group should be placed under close surveillance.

Some seventy persons were rounded up either as direct contacts or intimate associates and were screened carefully for evidence of syphilis. Of this group, one infected person was found and that in a sixteen year old boy whose disease was congenital.

Just when it appeared that the epidemiological effort would be fruitless, developments ensued from other directions. A hospital resident inquired whether a patient hospitalized there with rheumatic fever could be considered as having Biologic Falsely Positive serology since his serologic tests heretofore had always been non-reactive. The judgment of the consultant was that the patient was infected with early syphilis in addition to rheumatic fever and eventually he did admit exposure to the infectious case treated in another state. About the same time, a high titer was noted on a specimen submitted by a private physician. This patient was found to have florid secondaries for which she had not been treated, and named among her contacts a person who had been named by the original patient but who could not be located because he had been reported by a nickname only. It was determined that he had been treated for gonorrhea in the meantime, and that although he had a penile lesion at the time, the treating physician did not take a serologic test or otherwise investigate the lesion. His blood was reactive in high titer.

Over the next six months some twenty-seven persons were identified in the Delaware portion of this chain as having infectious syphilis, twenty-three of them primary and secondary while a substantial group was also

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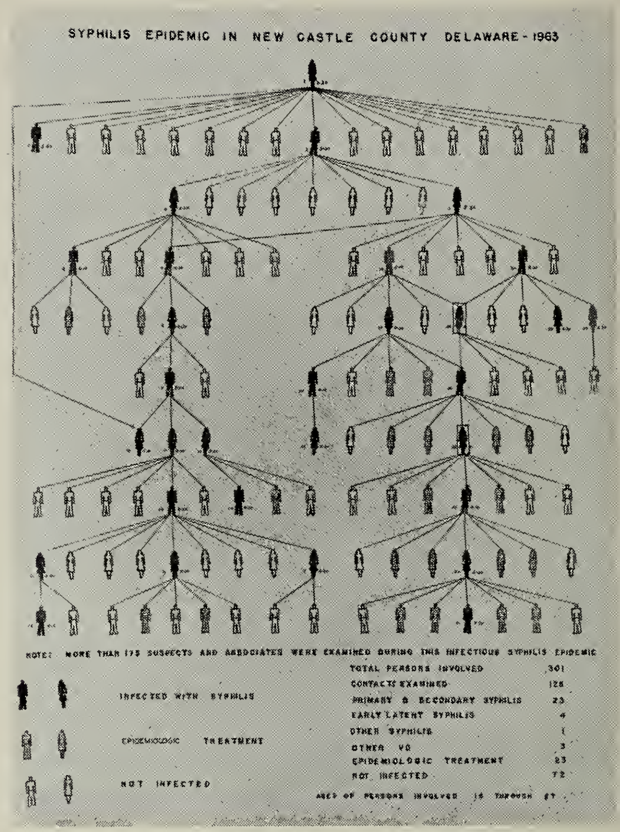
Dr. Porter is Director, Division of Venereal Disease Control, State Board of Health.

discovered in the other state. Not only did the chain cross state lines, but it also crossed race lines and age lines, the oldest person involved being 67 years of age while the youngest was 18 if we dismiss the 16 year old who had congenital infection. Three persons who were free of infection when screened early subsequently were infected by other persons and one patient treated early is believed to have been reinfected as she relapsed serologically and developed new lesions with known exposure to another lesion case. Each time there were palmar lesions and in the second instance direct tracing to a person whom it is believed she originally infected so perhaps she was getting her own spirochetes back.

Predeliction for involvment of palms and soles was very impressive in this series, that sometimes being the only manifestation. Three patients consulted physicians because of lesions of the hand and received treatment for them, but only one received serologic testing while the rest were discovered through epidemologic investigation.

One patient (#22) could be a key link in this chain except that at no time have we been able to determine that she ever had syphilis. She was named as a direct contact in four instances and indirectly several other times but she never showed clinical or laboratory evidence of syphilis. Three or four times during the period she was treated for gonorrhea and perhaps this suppressed the emergence of manifest syphilis. It is interesting to speculate whether at any time she was infected at a subclinical level and was able to pass the disease along while she herself was protected by the penicillin given for gonorrhea.

This report is limited to a period of eight months as the productive portion of this investigation was completed in this time although even at this writing it cannot be said that the spread is terminated. Another patient is believed to have relapsed and has been retreated while the person with whom he had been living and continuously exposed has disappeared and may still be infectious. Meanwhile it has been reported that the original patient has again been in Delaware, has a high titer at this time and may be reinfected so the whole process may begin again.


SYPHILIS EPIDEMIC IN NEW CASTLE COUNTY DELAWARE - 1963
NOTE: MORE THAN 175 SUSPECTS AND ASSOCIATES WERE EXAMINED DURING THIS INFECTIOUS SYPHILIS EPIDEMIC
INFECTED WITH SYPHILIS
EPIDEMIOLOGIC TREATMENT
NOT INFECTED
TOTAL PERSONS INVOLVED 301
CONTACTS EXAMINED 126
PRIMARY & SECONDARY SYPHILIS 23
EARLY LATENT SYPHILIS 4
OTHER SYPHILIS 1
OTHER VD 3
EPIDEMIOLOGIC TREATMENT 23
NOT INFECTED 72
AGES OF PERSONS INVOLVED 16 THROUGH 67

Summary And Conclusion

1. Delaware shares the upsurge in infectious syphilis which prevails throughout the U.S.
2. Circumstances facilitating epidemic spread are already in existence, creating local pockets when an infectious case is introduced into a promiscuous group.
3. Some details of such a chain spread are presented.
4: Syphilis must be considered as a possibility among patients who seek care for many varied reasons.
5. Despite frequent urgent exhortations to be alert for such cases, persons with clinical manifestations of syphilis are being seen by private physicians who have not been motivated to suspect the disease, confirm the diagnosis and assist in epidemiologic control.
6. Cooperation of every practicing physician is mandatory to achieve effective control.

ARE PREMARITAL EXAMINATION LAWS EFFECTIVE?

• Recent premarital serologic tests in Delaware will be tabulated in an effort to determine the feasibility of such mandatory testing as a method of detecting unsuspected cases of syphilis.

Winder L. Porter, M.D.

The U.S.P.H.S. is confronted with the question whether premarital examination laws can justify the expense entailed. In exploring this question, they are investigating their effectiveness in causing new cases of syphilis to be discovered and brought to treatment. The Delaware State Board of Health will cooperate with this investigation by a review of experience with premarital serologic testing in this state.

It is expected that the major portion of this investigation can be accomplished by analysis of information currently available. Section 5 of the premarital laws in this state provide that each laboratory approved to perform serological tests for marriage shall retain on file a copy of the original report form for a period of two years and that these shall be available for inspection by duly authorized representatives of the State Board of Health. Hopefully, there will be some laboratories which will have retained such records over a longer period and that these, too, can be analyzed.

The initial investigation will consist of a determination of the age, race and sex of all reactors and comparison with the same breakdown for all tests performed. The Central Registry of reported cases of syphilis will be consulted to determine what portion of the reactors have been reported as cases at some time, and what will be the incidence of infectious cases.

Several complications already have been anticipated and measures will be specifically addressed to them but undoubtedly there will be others encountered that have not been envisioned. It is recognized that a percentage of total tests which are reactive will be meaningless as there often will be repeated tests on the same individual, often in different laboratories. The State Lab will be expected to show a higher percentage of reactors both because it often is used to confirm reactive serologies in other laboratories, and because it accepts specimens from all sources while the private laboratories will represent only those who are willing to pay the fee exacted by those laboratories. Duplicate reports will be weeded out and credited to the lab giving the earliest date of determination of reactivity.

Some female reactors who ultimately are reported as infected and treated will not be found in the registry because they will have assumed their new marriage name by the time the report is made. Reports of recent investigations of reactive premarital serologies which have been furnished the VD Control Division will be available but not all reactors have been reported and reports of follow-up upon reactive serologies are usually not retained beyond one year. It, therefore, may be necessary in some instances to request the physician who originally submitted the specimen in question to again supply his opinion as to whether the patient was infected and a report of her treatment status. In the course of regular visitations to physicians by VD investigators, physicians will be asked about their experience with premarital testing as a casefinding measure, and to voice an opinion as to their effectiveness and justification.

Ideally, serologic testing should be just

(Continued on Page 196)

Dr. Porter is Director, Division of Venereal Disease Control.

New Members

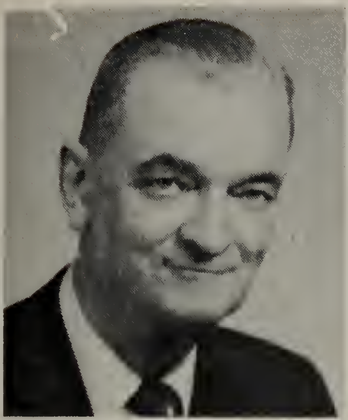
A. Yvonne Russell, Ph.D., M.D., University of Chicago School of Medicine, '58, was born in Washington, D.C. Delaware license: 1963; Specialty: Pediatrics; Office: State Board of Health. Dr. Russell was a physiologist before studying medicine and interning at the Delaware Hospital. A son—three, and a daughter—one, add to her full schedule. The Russells live in a 100 year-old house in Middletown, Delaware.

Harry S. Howard, M.D., University of Buffalo, '34, was born in Newark, N.J. Delaware license: 1952; Specialty: Psychiatry: Office: Delaware Mental Hygiene Clinic, Farnhurst. Dr. Howard's family is his hobby—two married daughters and a son about to enter military service. When time permits, he likes boating and fishing.

Nina B. Mchitarian, M.D., St. Batory University, Poland, '31, was born in Brzesc. Delaware license: 1962; Specialty: Psychiatry; Office: 204 Pennewill Drive, New Castle, Delaware. Dr. Mchitarian came here as a political refugee in 1961. Swimming, traveling and paintings are among her extra curricular interests.

Paul F. Dunn, M.D., Jefferson Medical College, '41, hails from Bristol, Rhode Island. Delaware license: 1963; Specialty: Child Psychiatry; Office: 2013 Baynard Blvd., Wilmington. Dr. Dunn, a transfer member from the Dauphin County Medical Society, Harrisburg, Pa., has five children. His hobby is sailing.

Franklin C. Fetter, M.D., Jefferson Medical College, '40, is a native of Park Place, Penna. Delaware license: 1963; Specialty: Director of Medical Education; Office: Delaware Academy of Medicine. Dr. Fetter, an associate member, has one son and enjoys golf primarily, and "a bit of gardening."



President's Page

I think it would be remiss not to take this first opportunity as president of the Medical Society of Delaware to offer thanks on behalf of us all to Floyd Hudson for his leadership this past year. The growth in medicine's interests and responsibilities makes the presidency of this society demanding and time-consuming. Dr. Hudson has done an excellent job, and is entitled to our sincere gratitude.

I am impressed by a thought from the 1964 report of the Prepayment Committee. Reviewing in detail its discussions with labor and management, the Committee predicted an increasing demand for "service contracts"—contracts that pay in full for covered services. The prediction is based on the attractiveness of the negotiated fringe benefit both to employer and employee, based on relative constancy of cost, on one hand, and on the other, tax considerations.

There is sincere doubt from friends and from foes of the service concept that such a contract is really the best use of the insurance dollar. This may be less germane than that the patient is spending his own dollar—either as cash or as a negotiated benefit in lieu of wages—and wants to use it to prepay a specific portion of medical expense.

The question is whether a plan can be devised to provide service benefits on terms equitable to physician and to patient, both. This society will never agree to anything less. Neither should it fail to seek such an arrangement in the best possible faith.

Delaware Academy of General Practice

PAPER ON MULTIPLE SCLEROSIS READ BEFORE CONGRESS OF PHYSICAL MEDICINE AND REHABILITATION

Dr. George J. Boines read a paper on the *Treatment of Multiple Sclerosis with Intrathecally Injected Methyl Prednisolone and Physical Medicine* at the 42nd annual session of the American Congress of Physical Medicine and Rehabilitation, August 23-28, 1964 at the Statler Hilton Hotel, Boston.

The abstract of the paper as it was published in the Boston program stated:

> *"Hypersensitivity of the central nervous system has not been eliminated as a possible etiologic factor of demyelination. The present use of intrathecal prednisolone has thus far been very beneficial in producing remissions of the disease, presumably thru its power to suppress inflammation and hyperimmunologic responses of the central nervous system. The subarachnoid route of administration is imperative since it is generally accepted, and our laboratory tests for hydroxycorticosteroids have shown, that the steroids do not cross the blood-spinal fluid barrier when they are administered orally or parenterally. In the past, rehabilitation thru the various modalities of physical medicine has been discouraged or avoided in multiple sclerosis because of the muscular fatigability which is prominent in this disease. Today, a well planned physical and occupational therapy program is an important part of the management of multiple sclerosis. An optimistic and encouraging outlook on the part of the physiatrist, physical therapist, and consultants is frequently sufficient to convert an immobile and discouraged multiple sclerosis patient into a hopeful, alert and cooperative individual. It is suggested that a complete re-evaluation of our rehabilitation theories of the multiple sclerosis patients should be considered by the Congress of Physical Medicine and Rehabilitation and an active optimistic type of program recommended."*

Mr. John M. Langone, medical writer of *The Boston Traveler*, commented on Dr. Boines' presentation on August 27, 1964 as follows:

"*The wheelchair is a disabling appliance for patients in the early stages of multiple sclerosis*," a Wilmington, Delaware physician, Dr. George J. Boines, told a meeting of experts on physical medicine and rehabilitation today. "*Prolonged sitting results in muscular contractures which eventually keep the patient from walking*," he added. Dr. Boines recommended instead, the use of canes and other aids in walking. Patients who lose the use of their legs can learn to drive automobiles equipped with special hand controls, he said, if they can retain the strength in their hands and arms.

While no known cure for MS has been found, Dr. Boines said, much can be done to slow its progress and help the patient to continue working and remain an active participant in family and community life. He advocated a positive approach to the management of MS and declared that physicians "must put an end to the defeatist attitude" displayed toward its victims. The objective is to treat the patient and his problems, not the disease, he said.

He recommended a course of treatment with methyl prednisolone, a steroid compound, followed by a carefully planned program of therapy, exercise and training. The muscular spasms characteristic of MS are alleviated following the injection of the steroid, allowing the patient to engage in muscle stretching exercises and other forms of therapy.

Dr. Boines is an active member of the Pennsylvania Academy and the American Congress of Physical Medicine and Rehabilitation. He began his clinical research on this disease in 1958 and has published four other papers on this subject in the past four years.

Editorials

NURSING LIAISON ACTIVITIES IN STATE MEDICAL SOCIETIES

In view of the current interest in nursing education, we are reprinting the following excerpt from the May 18, 1964 issue of the Journal of the American Medical Association.

An important objective of the Committee on Nursing is to work closely with state medical societies and particularly with those committees responsible for maintaining liaison with members of state nursing organizations. Prior to developing a definitive program geared to the needs of the states, the Committee believed it was essential to ascertain the extent of nursing liaison activities in all of the state societies. To elicit information for this program, the staff prepared a questionnaire which was forwarded to 52 state societies early in 1963. The following is a sampling of the information gleaned from the data:

—Forty-one of the 50 state societies responding conduct active liaison programs of one type or another with nursing groups. In 27 of these societies, meetings are called by either nurses or physicians. A committee on nursing, or comparable group, is responsible for liaison with nursing organizations in 35 states.

—Of the subjects most frequently discussed at joint meetings, nursing education, the physician-nurse relationship, patient care, and the shortage of nurses represent concerns of the physician.

—Suggestions for improving the nurse-physician relationship, in order of their highest frequency of occurrence, were to improve understanding and communication through joint effort (e.g., jointly planned refresher courses), to establish nurse liaison within the states, and to meet frequently with nursing groups.

—Significant to the work of the Committee were suggestions for ways in which the AMA Committee can best serve the state societies in strengthening the nurse-physician relationship. Most frequently mentioned were assisting in establishing nurse liaison within the states and providing information on other state programs, informing state societies on problems and trends in nursing education and service, and holding nurse-physician meetings at the national level.

The findings of the survey would indicate that in terms of future programming the committee will concern itself with the following objectives:

1. To devise a means of communicating with state societies in order to keep them informed on nursing problems and trends.
2. To prepare a simple guide to assist those state societies having no liaison activities with nursing groups to develop formal programs and to expand and strengthen present programs of existing committees.
3. To consider national and regional follow-up conferences after the first national conference for physicians and nurses.

In conclusion, a questionnaire for the purpose of eliciting information on liaison programs and activities with nursing groups was forwarded to 52 state societies. Fifty (96%) of the societies responded. Forty-one of the 50 respondents (82%) presently maintain liaison with the nursing profession in their state. It is important to note that nine states, including several with a high percentage of nurse and physician population, evidently have no forum for the exchange of ideas or for joint effort.

In Brief

New State Laws

A recent issue of *Medical Economics* made the statement that Delaware does not have a Good Samaritan Act. This is incorrect. Delaware's General Assembly passed such an Act in the current session, which has been signed into law by Governor Carvel. It provides that a physician who, in good faith, renders emergency service at the secene of the emergency shall be immune from civil liabilities. The bill was supported by the State Medical Society.

A more recent bill passed by the General Assembly, also with the approval of the State Society, provides that a minor person, if married, can give operative consent for himself, his spouse, or his children. Prior to the enactment of this law, it had been technically necessary to obtain the consent of a guardian or parent over 21 years of age.

1964 Infectious Disease Index

The latest figures released by the National Disease and Therapeutic Index (NDTI), shows that visits for German measles reached epidemic proportions in the first six months of 1964. Rubella visits were higher than average in the East, particularly in the New England and Middle Atlantic states. The epidemic was confined largely to children and teenagers (the largest number being in the "under 9" age group) with only one-fifth of the visits being accounted for by adults.

In the US PHS listing of infectious diseases, nine—lead by measles—were on the increase during the first six months of 1964. Others were strep throat, scarlet fever, encephalitis—including both primary and post-infectious encephalitis. Three infectious diseases—hepatitis, polio and typhoid fever were down. *Health Insurance Institute.*

Personal Glimpses

H. Thomas McGuire, M.D., has been appointed to the Advertising and Public Relations Committee of the National Association of Blue Shield Plans . . . Lemuel C. McGee, M.D., will serve as president of the United Community Fund of Northern Delaware . . .

Brief Brief

- With the help of a sizeable grant from the Epilepsy Foundation, scientists at Children's Memorial Hospital, Chicago, are testing a hunch that may lead to new knowledge about the way brain cells operate. Anticonvulsant drugs seem to alter the brain cells' absorption of sugar, a main source of nutrition. If this proves true, new ways of treating epilepsy may offer fresh hope to more than 2 million Americans with this affliction.
- A newly developed vaccine for prevention and cure of herpes simplex shows promising results, reports the Pasteur Institute Hospital, Paris. Clinical trials indicate the vaccine is effective and harmless for children as well as adults. Now awaiting approval by the French government, the new vaccine is expected to be marketed this fall. *Medical World News, June, 1964.*
- When the Americans speak of "emphysema," and the English speak of "chronic bronchitis," they are usually talking about the same lung disease. American and British chest specialists have suggested that the term "*chronic obstructive lung disease*" be used to cover this one disease and do away with the confusion in terminology. (*The American Review of Respiratory Diseases, July.*)

Rising Cost Of Hospital Care

The continued rise in hospital expenses is attributed largely to higher wage rates and the increased number of employees needed to provide the expanded services available in today's hospitals, says the A.H.A. It estimated that 241 employees were needed to care for every 100 patients last year, compared to 148 required in 1946. The total cost of caring for each patient rose to a record of $38.91 a day—an increase of $2.08 from the 1962 figure.

Universial Medical Symbol

The AMA-sponsored symbol of emergency medical identification has now been adopted by the World Medical Association for use in all 58-member countries. International travelers wearing the universal symbol as an indicator of their special needs in an emergency will be recognized immediately.

This Month In Washington

The F.D.A. has ordered drugs containing phenacetin (acetophenetidin) to be relabelled to bear warnings against kidney damage. The order becomes effective October 6, 1964. New labelling: "Warning—this medication may damage the kidneys when used in large amounts over a long period of time. Do not take more than the recommended dosage nor take regularly for longer than ten days without consulting your physician." The change was based on a report which concluded that prolonged use of the drug has been responsible for kidney lesions and disease.

New Manuals Available

Two new guides in the series of *Guides to the Evaluation of Permanent Impairment*," developed by the AMA Committee on Rating of Mental and Physical Impairment, are entitled: "Guides to the Evaluation of Permanent Impairment—Digestive Systems" and "Guides to the Evaluation of Permanent Impairment—The Peripheral Spinal Nerves." A limited number of copies may be obtained without charge upon written request to the Committee at 535 North Dearborn Street, Chicago, Illinois 60610.

Caleb Fiske Prize Essay

The Rhode Island Medical Society has announced as subject fo rthis year's Caleb Fiske Prize Essay "*Recent Advances in the Control of Respiratory Virus Diseases, Including the Exanthemata.*" The essay must be typewritten, double spaced and should not exceed 10,000 words. A cash prize of $500 is offered; essays must be submitted by December 7, 1964. For complete information write to the Secretary, Caleb Fiske Fund, Rhode Island Medical Society, 106 Francis Street, Providence, R.I.

Alcohol In Our Society

At least one in every 21 adults in the U.S.A. is "alcoholic" by medical definition. At a meeting of the Institute of Scientific Studies for the Prevention of Alcoholism, people were urged to turn the forces of society loose against the glamorization of drinking. Recommended were a harsher legal code for drinking drivers; promotion of mental health education in school and home; an increase in the moral teachings of churches and a curbing of alcoholic beverage advertising. The Institute concluded, "Too little has been made of the meaningful role of alcohol as a 'reward', emerging so unobstrusively in the life pattern of the individual as to blot out its growing importance in his ability to cope with life." *The National Committee for the Prevention of Alcoholism.*

Auxiliary Affairs

REPORT OF THE FORTY-FIRST ANNUAL AMA CONVENTION—SAN FRANCISCO

Though formal opening took place on Monday, June 22, the two preceding days were heavily scheduled with meetings for national officers and committee chairmen—possibly the most interesting and provocative were held by the By-Laws Committee and the Fall Conference Planning Committee.

Recognition of delegates, reports of national officers, Guest Day Luncheon, and Homemaker Service presentation occupied most of the first day's session, with a "Parade of Progress" (one of the most rewarding phases of the program) or highlights from State reports being reserved for Tuesday morning. The reports are brief and provide an opportunity for delegates to get new ideas, to learn at first hand what other states are doing, and to evaluate their own state program by comparison.

Of the guest speakers heard at general meeting, Dr. Ever Curtis was the most dynamic. She spoke forcefully and without notes. Her address, dealing with problems and dangers relating to medical legislation and politics, brought forth many requests from the floor for copies of the talk.

Excitement was generated at the Wednesday afternoon session when amendments to the constitution were presented. The amendment which most aroused Convention delegates was the controversial one—AMA approved—relating to raising national dues from one dollar to two dollars. It was passed by a majority vote. It reads as follows:

> *"Each constituent auxiliary shall transmit annually to the treasurer of the National Auxiliary, not later than March 15, dues amounting to two dollars for each of its members for the current year, which shall include a subscription to the National publication. Failure to transmit such dues prior to March 31 shall deprive that constituent auxiliary of its representation and right to vote in the House of Delegates for that year."*

The amendment does not become effective until 1965-66 dues are paid.

Another amendment of interest to county and state auxiliaries related to civil defense. By passage of this amendment, the Civil Defense Committee becomes known as the Disaster Preparedness Committee.

Though plans for the 1964 Fall Conference (Oct. 4-7) were not on the agenda for Convention discussion, there were numerous meetings of the Planning Committee. Of special interest for the opening session on Monday, October 5, is a condensed speech training course sponsored by Smith, Kline and French.

Off-the-Agenda Observations: (1) A common complaint was that Convention programming left too little time for delegates to see and enjoy San Francisco; (2) One state, Alaska, had less representation than Delaware. The lone member attending Convention meetings was Mrs. Robert Schuler. She and her husband joined the Delawareans at the Annual Luncheon for Past-Presidents on Tuesday; (3) No Delaware artist-physician had an entry in the AMA Art Exhibit. *Should the Woman's Auxiliary to the Medical Society of Delaware see to it that this does not happen next year?*

Attending all meetings of the Convention were the following Auxiliary members from Delaware: State President and delegate, Mrs. James T. Metzger; State President-elect and delegate, Mrs. Laurence L. Fitchett; Director, Mrs. Lemuel C. McGee; and Member-at-large, Mrs. Douglas M. Gay.

Mrs. Lemuel C. McGee
Director, National Auxiliary

Delaware
Medical Journal

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THE PROCTOLOGIC EXAMINATION IN GENERAL PRACTICE

• One of the most important procedures in the daily detection and diagnosis of cancer of the rectum and colon is the complete proctologic examination. This examination, including proctosigmoidoscopy, should be included in every routine physical examination. The technic and simple equipment that should be a part of every physician's armamentarium are discussed.

Robert A. McGregor, M.D.

Examination of that portion of the body derived from the embryonic hindgut and proctodeum—the colon, rectum, anal canal and adjacent structures—may be called a proctologic examination. The most important part of this examination is proctosigmoidoscopy. This does not imply that the examination should be performed only by proctologists. Quite the opposite is true; a proctologic examination should be a routine part of every general physical examination, whether it be performed by the general practitioner or the specialist. It is well recognized that cancer of the colon and the rectum is increasing in frequency, and it is a statistical fact that the cure rates for this disease have not been increased appreciably in recent years despite the many advances in surgical techniques and methods of treatment. It is apparent that the only means by which the mortality rate for cancer of the colon and the rectum can be lowered at this time is earlier diagnosis and treatment. Cancer of the colon and the rectum is a curable disease if surgical treatment is instituted before spread of metastases have occurred, but the diagnosis must be made before treatment can be given. Every physician must be aware of and accept his responsibility in the early recognition and diagnosis of malignant lesions of the rectum and the colon. With the routine application of a complete examination, the mortality and morbidity from cancer and other less serious but still important diseases can be materially reduced, and the general practitioner has the first opportunity to achieve this goal.

The indications for proctologic examination are usually stated to be rectal bleeding, pain, change in bowel habit, diarrhea, constipation, unexplained weight loss and anemia; however it is well to remember that many pathologic processes are asymptomatic in their early stages. Thus, the most important single indication for a proctologic examination is that a patient is having a general physical examination. This is particularly true in persons over 30 years of age.

Dr. McGregor is Associate in Proctology, Temple University Medical School; Assistant, Attending Staff, St. Francis, Delaware and Wilmington General Hospitals.

Equipment

A completely adequate examination may be accomplished with a minimum amount of relatively inexpensive equipment. A small tray that may be kept in the examining room will easily contain the essential equipment. This includes finger cots or rectal gloves, lubricant, long cotton swabs, and a proctosigmoidoscope with its lighting apparatus and insufflating bag. In addition to these essentials, the examination will be facilitated by having a long suction tip that may be attached to the sink plumbing or to a portable electric suction machine. While the anal canal can be well visualized on withdrawal of the proctosigmoidoscope after examination of the rectum and distal sigmoid, many clinicians prefer to use an anoscope or short proctoscope for examination of the anal canal. An advantage of this instrument is that probes or crypt hooks may be inserted through the lumen or adjacent to the scope for a more complete study of the anal canal and distal rectum.

Preparation of the patient prior to the examination should be kept as simple as possible. Some clinicians prefer to have no preparation at all so that the possible presence of blood in the bowel or mixed with stool may be more easily detected. This method, however, frequently leads to an inadequate examination, and the patient must return for a repeat examination after the bowel has been cleansed. A better routine is that of instructing the patient to take a small cleansing enema approximately two hours prior to examination. This may be an ordinary tap water enema or, for convenience, one of the commercial enema preparations in disposable plastic containers may be prescribed. In many instances a simple evacuant suppository will give satisfactory results. It should be remembered that most of the commercial enema preparations and evacuant suppositories produce a mild irritation of the mucosa which will be evident during the examination.

The two principal factors in ensuring a successful proctologic examination are consideration for the patient and gentleness. Female patients should be positioned and draped by the nurse. Draping should be adequate to prevent unnecessary exposure but must not limit the field of examination. The physician should explain to the patient the purpose of the examination and each step as it is performed.

Several positions may be utilized for a proctologic examination. The left lateral recumbent position (Sims) is convenient for anoscopy and inspection of the perineal and sacrococcygeal areas and is satisfactory for proctosigmoidoscopy in most patients. The knee-chest position with the head turned to the left side and the arms crossed above the head is advantageous for proctosigmoidoscopy, but the position is difficult to maintain and causes discomfort after a short time. It is not suitable for elderly, infirm or obese patients. The most ideal position for proctosigmoidoscopy is the inverted or jack-knife position on tables specially designed for proctologic examinations; however, it must be emphasized that an adequate examination may be performed without such specialized equipment. With the great majority of patients the examination can be performed easily, quickly and painlessly on any standard examining table or even in bed.

Procedure

The adequate proctologic examination is made in three individual steps. These are inspection, digital palpation and instrumental visualization. The steps should be performed in the above order. Inspection includes checking the sacrococcygeal area for pilonidal dimples, sinuses or cysts. In the perianal and anal areas one looks for fistulous openings, abscesses, excoriation suggesting discharge, bleeding, inflammation, abnormal pigmentation, swelling, skin tags, external hemorrhoids, and accentuation of radiating skin folds. Palpation serves to confirm the findings of inspection, and digital palpation of the anus, anal canal and rectum must precede the introduction of a scope in order to insure an open passage. In the adult the posterior wall of the rectum is so acutely curved dorsally that a blind spot may be formed at the anorectal junction and lesions may be missed visually unless previously palpated. The prostate and rectovaginal septum can be palpated for additional pathology; the cul-de-sac is often the site of "drop metastases" or pelvic abscesses, and the lower rectal tumors are frequently within reach of the examining finger. Anoscopy ordinarily follows digital palpation, however in the presence of a tender or spastic anal canal it is better to delete this procedure and go directly to proctosigmoidoscopy. The well lubricated anoscope should be gently inserted through the anus and anal canal into the distal rectum. The obturator is removed and as the anoscope is withdrawn, a good view of the anal canal is presented. The presence of internal hemorrhoids, anal papillae, infected crypts and other abnormalities is easily determined.

After the anoscopic examination is completed proctosigmoidoscopy is performed. Remembering the direction of the anal canal, the proctosigmoidoscope is inserted into the canal with the tip pointing toward the umbilicus. A sensation of diminished resistance indicates that the sphincters have been passed, whereupon the distal end of the scope is depressed anteriorly so that the scope may enter the rectum properly. Before inserting the scope past the sphincters it is advisable to tell the patient he will experience a sensation similar to that of defecation. This will prevent undue alarm on the part of many patients.

After the proctosigmoidoscope has been inserted into the rectum proper, the obturator is removed and the scope is advanced under direct vision. Any abnormality encountered should be noted; however more complete visualization can be accomplished as the scope is withdrawn. A circular motion should be used to inspect the entire circumference of the bowel and to flatten the mucosal folds and rectal valves as they are passed. It will be noted that the rectal mucosa is smooth and, as one reaches the so-called rectosigmoid junction, the mucosa becomes corrugated in a circular fashion. This usually is at the level of approximately 15 cms. from the anal outlet. If one encounters difficulty in passing the proctosigmoidoscope because of "pockets" or angulations of the bowel, gentle air insufflation should be used. This usually will open the bowel so that the next segment may be entered with ease. When insufflating, the patient should be warned to expect a crampy "gas-like" pain in the abdomen. The instrument should never be forced and pressure should always be gentle. It is always better to visualize perhaps 12 to 15 cms. and be safe, rather than try to do more and be sorry.

No proctologic examination is absolutely complete until a barium enema x-ray study of the colon is performed. This will determine the presence of second, multiple or unassociated pathologic conditions not otherwise suspected.

In conclusion, the tragedy of an error by omission can be avoided by the routine performance of a complete proctologic examination as part of the general physical examination; and, by adding this examination to his routine, the general practitioner has the unique opportunity to be the first step in increasing the cure rate for cancer of the colon and the rectum.

LIFE-SAVING PROGRAM IN DELAWARE

The Delaware Division of the American Cancer Society is launching a statewide program of public and professional education in an effort to bring about greater awareness of the danger of cancer of the colon and rectum, and the large number of lives that may be saved if the disease is detected in time. The program will include telecasts, radio spot announcements, newspaper publicity, speaking engagements, and widespread showing of the movie "Life Story" together with a "take-home" piece of literature on the subject.

The physician's cooperation in discussing the detection of colon-rectal cancer with his patients and the inclusion of both digital and proctoscopic examinations in a regular check-up is vitally important to the success of this program.

ERRATIC PERSISTANCE OF INTRATHECALLY INJECTED METHYLPREDNISOLONE ACETATE

• It is the purpose of this paper to present new data on the persistence of steroid in CFS as measured by serial 17-hydroxycorticosteroid (17-OHCS) determinations, and to comment on the erratic relationship noted between laboratory and clinical findings.

George J. Boines, M.D.

Since 1958 I have had under study an expanding series of patients with multiple sclerosis. As previously reported,[1-3] their management has involved serial intrathecal injections of methylprednisolone acetate,* general medical and rehabilitory measures, and high protein, low allergy diet. One key feature of the regimen has been to obtain cerebrospinal fluid (CSF) for laboratory study immediately before each injection of corticosteroid, a procedure also followed by other workers.[4-9]

Materials And Methods

Altogether, 35 patients with multiple sclerosis were given a total of 223 intrathecal injections of a microcrystalline steroid, methylprednisolone acetate, in amounts varying from 20 mg. (0.5 ml.) to as much as 120 mg. (3.0 ml.). The number of injections per patient varied from one to 33. In 16 of these patients one or more assays were carried out for 17-OHCS using the following methods:

> Lumbar puncture was done with the patient on his side in the usual flexed position. Sterile technic was used following local anesthesia with 1 per cent mepivacaine hydrochloride (Carbocaine). A spinal needle, 19 or 20 gauge, has been found the most suitable for a free flow of the steroid crystals. After measurement of cerebrospinal fluid (CSF) pressure, about 5-7 ml. of fluid was obtained for examination for 17-OHCS and for evaluation of cells, protein, and globulin (Pandy). The fluid was stored in the freezer until needed for steroid evaluations. The methylprednisolone acetate was drawn into a 10 ml. syringe which was immediately attached to the spinal needle. Spinal fluid was then withdrawn to the capacity of the syringe in order to create an even suspension. The mixture was injected slowly; more fluid was withdrawn at intervals to demonstrate that the needle was still in the subarachnoid space, and, at the same time to resuspend the steroid microcrystals which tend to settle in the dependent areas of the syringe. At the completion of the injection, the spinal needle was partially withdrawn to avoid loss of fluid. The stylet was replaced, the needle was removed, and a small dressing placed over the puncture. The patient was instructed to remain in a prone or supine position for one hour, and was then discharged with instructions to avoid fatigue for the remainder of the day.

The chemical procedure used in determining steroid levels was a modification of the method suggested by Nelson and Samuels;[10] these studies were done at the laboratories of Dr. Edward Kravitz, 2008 N. 56th Street, Philadelphia 31, Pennsylvania.

For purposes of analysis, these determinations were of two types. First were those done on seven control CSF specimens before any steroid was injected. The other type in-

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*The Upjohn Company trade name: Depo-Medrol.

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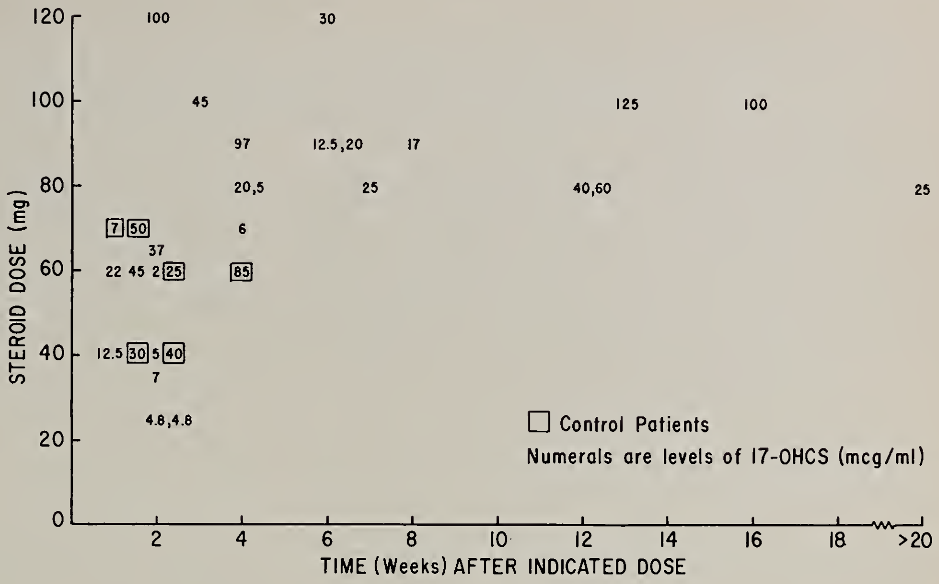

volved assays done on 59 specimens obtained at known intervals after known amounts of steroid had been administered intrathecally.

An additional five patients with other neurologic disorders were similarly studied as controls. Diagnoses were: amyotrophic lateral sclerosis, dystonia musculorum deformans, alcoholic polyneuritis, muscular dystrophy, and lumbar disc syndrome. Control determinations were done on three of these patients, and post-steroid assays for 17-OHCS were done once in three, twice in another, and six times in the fifth patient.

Results

In the study group of 19 patients with multiple sclerosis, the seven control values for 17-OHCS were all zero, as were 34 of the 50 post-steroid assays (57 percent). Examination of the 25 "positive" reports showed that concentrations of 17-OHCS ranged from 2.0 to 125.0 mcg. per ml. But the impressive features of these results were the intrapatient and interpatient variability. One, for example, had 12.5 mcg. eight days after a 40 mg. dose, and then a negative assay eight days after 80 mg.

In Figure 1, I have set out the positive assays in terms of the duration of time elapsed since injection of the steroid dose shown on the ordinate.

The variation in the reported values for 17-OHCS was outstanding. In one patient, for example, 2.0 mcg. per ml. were found two weeks after a 60 mg. dose; another had 85.0 mcg. four weeks after the same amount.

Values observed in the five non-multiple sclerosis patients have been entered as squares in the Figure. They did not appear to differ remarkably from those of the study group.

Comments

On the basis of several thousands of intrathecal injections given by many workers[4,6,11,12] in humans and in experiments on dogs, methylprednisolone is, at the present time, considered to be the most effective anti-inflammatory and antiallergic steroid, the least irritating to the CNS, and the longest acting. One would expect that an intrathecal injection of microcrystalline material would give persistent and predictable levels for several days or weeks. However, this has not been the case with us or in the experience of Seghal[13] who noted that there was considerable variation in the rate of transference of the steroid from the spinal fluid into the blood.

Five of their patients were tested beyond the 21st day and in four of them steroid was still measurable in the spinal fluid in amounts ranging from 1 to 26 mcg. per 100 ml. One patient received methylprednisolone orally, 4 mg. four times a day for eight days and at the end of that period there was no steroid measurable in the lumbar spinal fluid.

The reasons for the variations in steroid dissipation are not clear. Several possibilities may be considered, such as difference in the rate of absorption of the steroid by the venules, capillaries, lymphatics, or brain and spinal cord substance. Corticosteroids are known to exert their influence on inflamed and allergic tissue through action at the cellular level. It is postulated that the cord lesions are bathed by the steroid, and absorption occurs through the pia and cord vascularity and lymphatic systems. The relaxation of muscle spasm and the greater range of motion of joints which have been noted by us within 48 hours after the injection are so constant that they could not be fortuitous or "psychological." Van Buskirk[8] et al. stated that the mechanism of the transient reduction in spasticity and improvement in ambulation and bladder control could be due to a local effect of the drug on the lumbosacral roots and consequent alterations of the stretch reflex. Five of their patients acting as controls received exchange injections of CSF ballottement of the CSF steroids, and none experienced noticeable beneficial effects. It is reasonable to conjecture that reduction of local inflammatory edema around the cord lesions reduces pressure and allows uninhibited transmission of impulses to the muscles involved.

Most of the assays, regardless of the time interval were reported as negative for 17-OHCS. Evidently there must be a fairly brisk circulation of CSF, with the steroid ordinarily being dissipated wthin a few days into the systemic circulation. Another important factor which cannot be measured is the loss of CSF into the extrathecal space which is thought to seep out through the lumbar puncture itself.

From the clinical point of view, it was noted that most patients were able to "feel" when the steroid in the subarachnoid space lost its effect. Several learned to estimate the size of the dose by the duration of the remission. With the smaller doses of 1 ml. or 1.5 ml. (40 to 60 mg.) two to three weeks appeared to be the maximum clinical improvement subjectively, whereas with the larger doses of 2 to 2.5 ml. (80 to 100 mg.), the improvement lasted four to eight weeks, and, in an occasional patient, 12 weeks. Some of the mildly affected patients maintained their plateau of improvement for from six to twelve months after the first series of six injections. The objective improvements lasted much longer than the subjective ones.

Summary

Assays at different intervals after intrathecal injections of methylprednisolone acetate were done for 17-hydroxycorticosteroids in 16 patients with multiple sclerosis, and five others with other neurologic disease. All assays and values for 17-hydroxycorticosteroids varied remarkably from patient to patient, and from time to time in the same patient when serial tests were done. Fortunately—whatever the reasons for these variations—clinical improvement in terms of lessened muscle spasm, improved urinary bladder control, and improved eye and locomotor function appeared to be independent of measurable steroid concentrations.

ACKNOWLEDGMENTS

The methylprednisolone used in this study was kindly furnished by The Upjohn Company, Kalamazoo, Michigan. The laboratory work was supported by a grant from the same company. The clinical research was sponsored by the Jay Hughes Memorial Medical Research Foundation of Wilmington, Delaware.

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EVALUATION OF TYBAMATE IN THE CLINICAL MANAGEMENT OF ANXIETY

• This clinical evaluation employing a new tranquilizer "Tybamate" comprises a double blind placebo controlled non-crossover technique with fifty out-patients. The results appear favorable as to the efficacy, safety and reliability of this new drug.

Robert Seeherman, M.D.

The concept that anxiety is the result of specific dysfunctions of the brain is receiving increasing verification as more precise methods of experimental investigation become available. Whether the brain dysfunction causing anxiety is congenital or acquired, anatomical or biochemical in nature, endogenous or exogenous, primary as the result of a constitutional fault or secondary as the result of psychic or somatic experiences, the clinician sees frequent instances of its existence in patients with abnormally elevated apprehension, tension, and uneasiness. The objective of the clinician must be to relieve the anxiety and thus help such patients to regain their mental equilibrium so that they may once again lead healthy productive lives.

Therapy for the relief of anxiety should be as specific as possible, directed toward alleviating the anxiety-causing brain dysfunction without discomforting side actions that impair central nervous system reactivity and without other untoward intrusions on physical well-being. Although barbiturates were at one time used widely to reduce anxiety, it is now recognized that they have no specific anti-anxiety actions. They affect anxiety only by "smothering" it in hypnotic doses which result in drowsiness as well as concomitant losses in sensory perception, motor performance, and other central nervous system functions essential to alertness and exercise of judgment.

Tybamate,* however, has been reported to produce specific anti-anxiety effects through stabilization of emotional circuits at subcortical levels.[1] Preliminary clinical observations have suggested that this drug is highly effective in relieving anxiety and tension states —both those associated with somatic disturbances and those accompanying personality disorders and behavior problems. It has also appeared to be valuable in alleviating the emotional components of senile brain disease such as anxiety, agitation, depression, insomnia, and anorexia.[2]

In view of the apparent specific calming action of tybamate and its reported unusual freedom from accompanying sedative side effects, it was decided to evaluate its therapeutic effectiveness in the management of anxiety states encountered among private outpatients.

Exploratory Study

Thus a preliminary pilot study was initiated in which tybamate was administered to 52 outpatients. The primary diagnosis in 46 of these patients were anxiety states of acute or chronic nature. Nine of these 46 had associated symptoms of depression. The remaining six patients had primary diagnoses of reactive depression (4), acute hysterical reaction (1), and menopause syndrome (1). Most suffered from organic disorders as well. Because many of these patients previously had used medication which had either been generally ineffective or productive of unto-

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*'Solacen', Wallace Laboratories, Cranbury, New Jersey.

ward reactions, this group was selected as a suitable challenge to the reputed actions of this new tranquilizer.

Tybamate was administered in doses which ranged from 750 to 2000 mg. daily for periods of a week to nearly three months (average: 29 days). Certain symptoms, chiefly agitation, depression, irritability, fearfulness, and somatic manifestations, were common to most patients. The changes effected by tybamate in the intensity of these symptoms were considered to be the most important criteria for an appraisal of the drug's merit. Final analysis of these changes, as reported by the patient and evaluated by the physicians, showed improvement in each symptom over a range of 56 to 59 percent. At least some *overall* relief was obtained in 90 percent of the patients; pronounced or complete relief was achieved in 57 percent. Side effects were not troublesome, occurring in only eight patients. They prompted discontinuation of therapy in two patients who complained of mild to moderate nausea while on the drug. Significant sedation was notably absent.

These results suggested the importance of a new, controlled study designed to eliminate possible placebo influences on accurate evaluation of the drug effects.

Controlled Study Of Tybamate

This evaluation comprised a double-blind, placebo controlled, non-crossover technique with 50 outpatients assigned alternately to two groups of 25 each. Patients were Caucasian, about average in intelligence and educational attainment, and from urban families of slightly above-average income. Their ages ranged from 19 to 87 years with a median of 40 years; 13 were male and 37 female.

Nineteen patients were diagnosed as having acute anxiety, 20 as chronic; one of the patients with acute anxiety and two with chronic anxiety also manifested reactive depression; five additional patients were in anxiety states relating to the menopause. The six remaining patients had a primary diagnosis of reactive depression.

The severity of seven symptoms—anxiety, agitation, fearfulness, irritability, "jitteriness," depression, and somatic complaints—was evaluated prior to and at the termination of treatment. The first and third columns of Table I show the number of patients with each degree of severity of these symptoms at the pretreatment phase of the study.

Method

Tybamate capsules of 250 mg. and placebo capsules of identical appearance were designated by code numbers so that both the investigator and the patients were unaware of the identity of the preparation being dispensed. Dosage of tybamate ranged from two to six capsules daily (500 to 1500 mg.), in most cases one capsule three times daily and two at bedtime, and duration of treatment varied from 5 to 24 days with an average of 11 days. Placebo dosage varied from 5 to 8 capsules daily for 3 to 14 days with an average of 8 days.

No other psychotropic medications were used, but medications of other types such as antidiabetic, antihypertensive, diuretic, and hypnotic agents were administered when specifically indicated for accompanying organic or functional disorders.

Results

The double-blind procedure equalizes for both the placebo and tybamate-treated groups any personal influence of the investigator which might tend either to augment or to inhibit the strictly pharmacologic effects of the medication. Therefore the most illuminating comparison is that between the pretreatment and final evaluations of the severity of the seven symptoms studied in these patients. In assessing symptom severity, of course, the investigator was unaware of whether the patient was in the placebo group or the tybamate group, and all statistical analysis of data were completed before the code was revealed.

Table I summarizes the frequency in each group of the varying degrees of severity of each symptom in the pretreatment evaluation and in the final evaluation. When the initial and final values are compared, it is noted that the increase of patients with slight or absent symptoms in the tybamate group is in sharp contrast to the generally negligible

TABLE I

Symptomatic Responses To Tybamate and Placebo

	*Grade of Severity**	*PLACEBO GROUP*		*TYBAMATE GROUP*	
		pretreatment	*final*	*pretreatment*	*final*
Anxiety	0	—	—	—	3
	1	4	7	—	21
	2	18	16	22	1
	3	3	2	3	—
Depression	0	4	4	9	20
	1	11	13	11	5
	2	9	8	5	—
	3	1	—	—	—
Jitteriness	0	—	2	1	10
	1	7	10	2	14
	2	17	12	21	1
	3	1	1	1	—
Somatic Complaints	0	4	6	4	16
	1	10	10	10	9
	2	11	9	11	—
	3	—	—	—	—
Fearfulness	0	8	9	16	20
	1	14	14	2	5
	2	3	2	7	—
	3	—	—	—	—
Agitation	0	—	2	—	9
	1	5	7	2	16
	2	19	15	22	—
	3	1	1	1	—
Irritability	0	—	2	2	9
	1	6	8	2	15
	2	18	14	19	1
	3	1	1	2	—

*0—Absence of Symptoms
1—Slight Severity
2—Moderate Severity
3—Marked Severity

changes in these categories found in the placebo group. Likewise, the very marked decrease in numbers of patients with moderate and marked symptoms seen after tybamate treatment is in clear distinction to the very slight reductions found in the placebo group.

More easily interpreted figures in the form of weighted scores in Table II afford a concise comparison of the effects of the two compounds. These figures are the sums of the products of the frequency figures given in Table I multiplied by the respective numerical values of the degrees of severity.

Comparison of the weighted scores shows the much greater shift toward absence of symptoms and reduced degrees of severity (lowered numerical scores) in the tybamate group than in the placebo group. The totals of the individual weighted scores in each

TABLE II

Percentage Improvement of Target Symptoms Shown by Weighted Scores*

	PLACEBO GROUP			TYBAMATE GROUP		
Symptom	*pretreatment*	*final*	*percent improvement*	*pretreatment*	*final*	*percent improvement*
Anxiety	49	45	8.2	53	23	56.6
Depression	32	29	9.4	21	5	76.2
Jitteriness	44	37	15.9	47	16	66.0
Somatic Complaints	32	28	12.5	32	9	71.9
Fearfulness	20	18	10.0	16	5	68.8
Agitation	46	40	13.0	49	16	67.3
Irritability	45	39	13.3	46	17	63.0
Totals	268	236	11.9%	265	91	65.5%

**See text for explanation*

column represent the composite symptom-severity of each group before treatment and after. The *initial* scores for each group (268 and 264) show no significant differences between them. However, the smaller *final* score for the tybamate group is significantly different (Chi square test) from that for the placebo patients at the 0.01 level (99% confidence).

Each patient was also rated for overall relief attained on the basis of the many factors which comprise a clinician's ultimate judgment of improvement. Whereas 60 percent of the tybamate-treated patients experienced complete or marked relief, and 36 prcent experienced moderate relief, none of the patients of the placebo group had results which fell into either of the first two improvement categories, and only 12 percent experienced moderate relief. Again, the Chi square test shows these differences to be statistically significant ($p=.01$).

Side effects were minimal and were reported by only three patients receiving tybamate and by one receiving placebo. In the tybamate group one patient reported drowsiness, one, light-headedness and slight nausea, and one, slight dizziness. Drowsiness also was reported by one patient receiving placebo. No reaction was serious enough to suggest stopping the drug.

Summary And Conclusions

A new tranquilizer, tybamate, was evaluated in an exploratory clinical assessment experiment followed by a controlled evaluation, together the studies incorporating over 100 patients. Four-fifths of the patients had primary diagnosis of anxiety; the remaining were in various depression states. All showed many of the symptoms usually associated with these conditions: agitation, irritability, somatic complaints, etc.

The double-blind evaluation with placebo showed significantly greater group as well as individual improvement in the effect of tybamate on patients. Complete, marked, or moderate relief occurred in 96 percent of the tybamate patients compared with only moderate relief in 12 percent of placebo patients, none of whom showed complete or marked improvement. The statistical significance of the difference between the active agent and placebo was established at the 99 percent confidence level. Tybamate (250 mg.) dosage was usually in the form of five capsules a day (one t.i.d. and two h.s.), although it ranged up to 2000 mg. daily, and for periods as long as three months (non-double-blind phase).

The minimal side effects encountered indicate a further advantage of tybamate over previously used drugs. Except for two patients who discontinued the drug because

(*Continued on Page 220*)

THE PHYSICIAN'S ROLE IN HIGHWAY SAFETY

• The authors believe that physicians must assume heavier responsibility as medical judges in this age of automotive advances. Blanket approval will no longer suffice. It is urged that the medical community make positive recommendations.

Colonel Eugene B. Ellis
Pierre L. LeRoy, M.D.

The physician's role in highway safety has changing implications. A combined responsibility of physicians and the State Law Enforcement Agencies and their Advisory Boards is emerging. It appears that the family doctor and specialist have an increasing responsibility which is extremely difficult to define by specific medical standards. In the past, the role of the physician has been static, that is, to determine the physical and mental capability of driver applicants on a broad basis.

The emphasis has not been on transitory or temporary conditions, which changed the driver's state of consciousness or mechanical ability to perform skilled motor acts under increasingly rigid requirement. It is no longer enough for the physician to make a statement that a driver applicant is capable of driving a motor vehicle. The emphasis now must be placed on changing mental and physical attributes of drivers as related to both acute and chronic disease.

As physicians, we have not kept pace with either the automotive industry in upgrading driver requirements from a medical standpoint, nor have we kept pace with the improved statutes of highway safety as evolved by the Legislature and those agencies concerned with highway safety.

The medical problem, at present, seems to fall into two categories:

(1) To make specific recommendations for finite criteria for better driver standards to help prevent automobile accidents.

(2) To maintain an awareness of a driver-patient change in abilities to perform this skilled motor act relative to acute or chronic illness.

In many cases, the family physician is the first one to become cognizant of insidious mental or physical conditions which might prevent the safe operation of motor vehicles. A personal physician may be hesitant to demand or request voluntary restriction of driving. This feeling should be overruled by objective criteria. This allows time to establish a more definitive diagnosis. Once serious conditions are recognized in which the driver-patient cannot successfully perform the increasingly demanding requirements of operating motor vehicles on multiple lane highways at high speeds, a positive recommendation should be made to the Department of Motor Vehicles.

The evaluation for overall driver competency is not solely the role of the family physician, but is made in conjunction with the Driver Improvement Division of the State Motor Vehicle Department, who in turn, may refer the problem to a specialty group in medicine for a more definitive opinion.

The present status provides that the Motor Vehicle Department shall not issue operator's or chauffeur's licenses to any person who is an habitual drunkard or is addicted to the use of narcotic drugs. Any applicant who has been adjudged "insane or an idiot, imbecile, epileptic or feeble-minded," and who has not at the time of such application been restored to competency by decree, or released from a hospital or upon a certificate of the superintendent's office that such a person is competent, may not drive. Further, such persons afflicted with or suffering from such mental

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or physical disturbances which will serve to prevent them from exercising reasonable and ordinary control over a motor vehicle while operating the same upon the highways, would require even further medical, and perhaps, psychiatric evaluation. The statute further provides, under the discretionary suspension of licenses, that the department may suspend the license of any person who is incompetent to drive a motor vehicle or is afflicted with a mental or physical infirmity or disability rendering it unsafe for such person to drive.

It is the earnest desire of the department to work closely with the driver who has a medical infirmity appreciating that many drivers are dependent on their livelihood by operating a motor vehicle directly or indirectly.

Whenever good cause appears, the Motor Vehicle Department may only impose restrictions suitable to the licensee's driving ability, with respect to the type of special mechanical control devices required on a motor vehicle or other restrictions applicable to the licensee's driving ability arising out of cause by the physical defects or infirmity as the department determines. This authorizes the issuance of special or restricted licenses. The licensing problem for the motor vehicle operator is becoming increasingly complex. A definite responsibility of the state to permit only qualified drivers to operate the present day highpowered vehicles is paramount.

From the preventative standpoint, no satisfactory examination has been devised yet which could separate those drivers who tend to be accident prone from those who do not. As a result, many drivers who are safe when initially examined and licensed may become careless or may develop acute or chronic disease which changes their ability to drive. Moreover, with the increasing life span, degenerative processes associated with aging are becoming more of a problem to evaluate. Vital sensory systems requiring constant reappraisal are visual acuity, the visual fields, night blindness, difficulty with depth perception, and transitory blindness as seen with cerebral vascular insufficiency states. The special sense of hearing with losses that cannot be corrected by proper mechanical aids also requires proper evaluation. Amputee problems may require specific mechanical aids which may be recommended by the Bureau of Driver Improvement of the State Police. Medical infirmities in which there is a transitory change in the state of consciousness will require further specific evaluation:

(1) In the field of neurological diseases, such conditions as generalized cerebral vascular insufficiency, progressive senility with impaired judgment, post-traumatic brain syndromes, and post-encephalopathic states should be repeatedly evaluated by competent neurologic examination for license restrictions.

(2) In the fields of medicine, psychiatry, otology, and ophthalmology, there are similar limiting conditions.

During the past decade, there have been listed 4,917 traffic accidents in the state of Delaware involving operators over the age of 65. Of this total, 71 were involved in fatal accidents. The overall traffic accident rate for this age is only approximately 4%.

Many of the patients in this age group have changing mental and medical conditions which are associated with degenrative types of illness. To reappraise the status of this group, the law enforcement divisions of the State of Delaware have started to re-examine drivers in the older age group. It is not the intent to single out a specific age group, but rather to place the re-evaluation on a standardized practical basis.

In summary, the physician's role in highway safety is no longer a passive role, but requires an increasing amount of medical participation.

In what way can the physician help in the highway safety program for the State of Delaware?

(1) By a voluntary request of patient-driver to limit their operation of a motor vehicle during the time a diagnosis is being made.

(*Continued on Page 220*)

Editorials

MEDICAL WRITING

Under the homey title of "Advice to Authors" is presented in the current (October 5th) JAMA a 24 page synopsis of practices conducive to the preparation of a good manuscript. The editors (JAMA) express the hope that their well chosen words have anticipated all the questions in the mind of a physician who is preparing a manuscript for publication.

Their offering is excellent and they can be assured that their product is indeed of the highest quality. This editor is amazed at the tremendous amount of material presented in such a small space.

The first five sections deal with the actual writing of a paper. The various categories of subject material are discussed from both the positive and negative aspect; i.e., how should one report his work, what medium, is it worth reporting or is it not? The next section is concerned with specific parts of the text from general organization down to the smallest detail. The next section concerns composition and style and this is followed by one detailing the mechanics of manuscript writing.

The first five sections alone should be invaluable to the author, both novice and veteran. Admittedly, the section on style needs amplification but there is an excellent selected bibliography. While we can read about style, it can be attained only by repeated and constant practice.

While sections six to ten are not as immediately useful to the author, they do contribute to his knowledge of a complex process by explaining subjects such as submission of the manuscript, its review and its processing. Reprints and copyright practices are also included. Reading of these sections should answer the frequent question as to why my manuscript can not be in this month's journal?

The final five sections are devoted to the technical aspects of illustrations, graphs, and tables.

All told, this is an excellent work and will go far to answer questions of authors who will take time to consult it. Extra copies may be obtained at 50 cents a copy from the AMA.

While there is still no hope for the author in whose mind there are no questions, this guide will undoubtedly fill a gap between "Counsel to Authors" and the more lengthy books on medical writing and is highly recommended.

THE PHYSICIAN-PATIENT RELATIONSHIP

This all important subject has been stressed on these pages many times in the past. What to tell the patient as well as taking time to explain have been recurrent themes.

An editorial in the September 1964 issue of the *Annals of Internal Medicine* stresses these points and suggests that the moments spent by the physician with the patient following examination and treatment might well be the most important factor in the ever important field of the image of the medical profession.

The physician of today must go out of his way to overcome difficulties in communication with his patient and regardless of the different formulae for achieving this goal, the common denominator is time. We must take the time to communicate with our patients, clearly, concisely, varying details according to the individual's ability to understand, but in all events avoiding confusion and misunderstanding.

THE PHYSICIAN'S ROLE IN HIGHWAY SAFETY

(Continued from Page 218)

(2) By prompt reporting of acute or chronic illness, which, in the physician's opinion may prevent the safe operation of a motor vehicle.

(3) By establishing a set of standards which both the family physician and specialist may adhere to in given medical disfunction.

We would like to emphasize in conclusion that the physician and the law enforcement and highway safety agencies of the state work more closely together in the future with the overall object of improving highway safety in the State of Delaware.

EVALUATION OF TYBAMATE

(Continued from Page 216)

of nausea (non-double-blind phase), all tolerated continued day by day use of tybamate extremely well. In its properties of anxiety mitigation with fewer side effects, it compared favorably with hydroxyzine, chlordiazepoxide, and prochlorperazine as well as meprobamate and the barbiturates. Accordingly, it is concluded that tybamate appears to be a safe, reliable, and valuable drug for the treatment of anxious or depressed patients.

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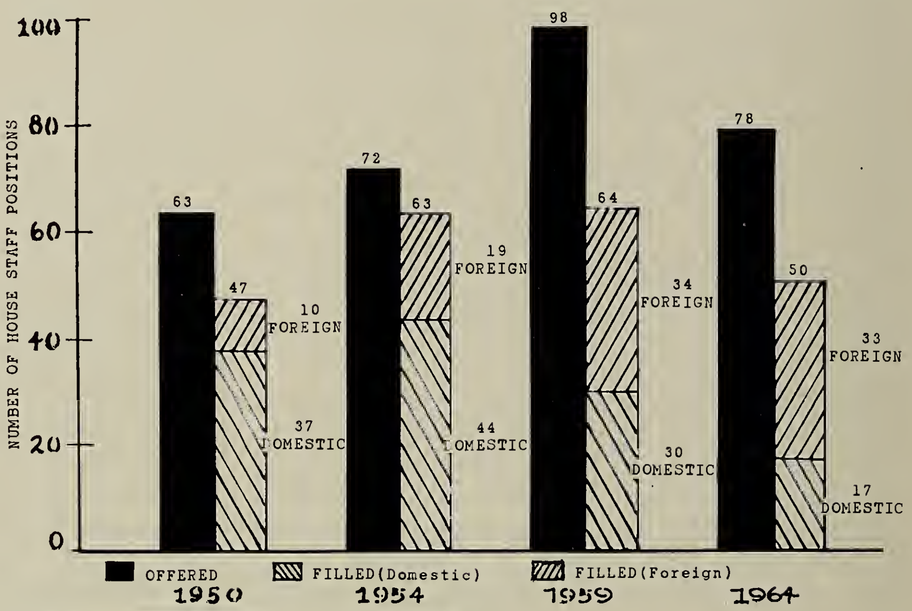


CHART 1
HOUSE STAFF POSITIONS
OFFERED AND FILLED
1950-1964

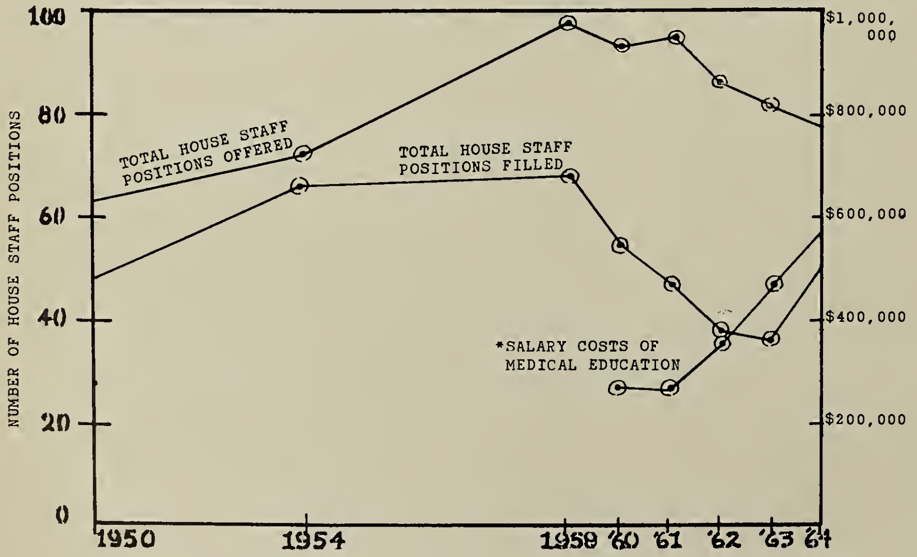
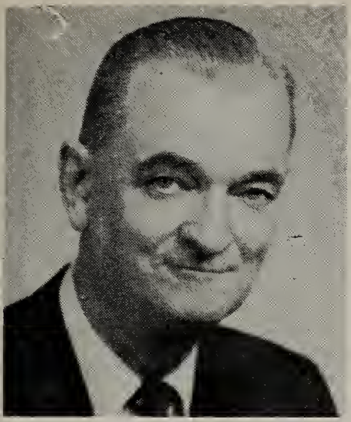


CHART 2
HOUSE STAFF PICTURE
COMPARED WITH RISING
MEDICAL EDUCATION
COSTS BORNE BY
HOSPITALS

* 'Salary Costs of Medical Education' consists of payments to Interns, Residents, Directors of Medical Education and House Physicians. Data not available for all 3 hospitals prior to 1960.

Charts compiled by John Newport, Administrative Resident, Delaware Hospital, Wilmington



President's Page

HOUSE STAFF EDUCATION IN DELAWARE

The recent "Delaware Medical School Feasibility Study" brings out some interesting points. Appendix three of this publication "Supply of Physicians" compares the ratio of physicians in Delaware with the ratio in the United States, per 100,000 population. The tabulation is not too unfavorable except for a single entry:

Training Programs (M.D.'s)	Delaware Mid 1963	United States Mid 1962
	9.0	19.9

(References and footnotes not pertinent have been deleted.)

Opposite this page is Chart 1 showing house staff positions offered and filled in the State of Delaware 1950 to 1964. This chart really represents the internships and residencies offered in the Wilmington General, the Memorial and the Delaware Hospital because these are the only general hospitals in the State that have been accredited for graduate training of M.D.'s. As the details of the period between 1959 and 1964 are displayed on Chart 2, we see that the 50 interns and residents in the 1964 tabulation represent a come-back. In the period between 1959 and 1962 the number of internships reached its lowest point. In 1963 the number filled increased a bit and in 1964 it increased a bit more, but positions offered continued to decline. It is interesting to note also that the ration of domestic graduates to foreign medical graduates reversed between 1950 and 1964.

Discussions between doctors about graduate medical education are as interesting and varied as doctors themselves. Generally, however, they say, "The quality of interns is not what it used to be."

We live in a wonderful State, with a sound economy, a great culture, recreational features almost unmatched and among many other advantages: enough in fact, to attract 75% of our medical practice today in Delaware from other States. But we are not attracting interns and we are not attracting residents from our own medical schools in the United States. Instead of criticizing the product of the medical schools, is it possible that we should look closely at ourselves? Could it be that we are at fault?

Next Issue: *The Cost of the Small Gain in 1963 and 1964*

Delaware Academy of General Practice

TWO-PART SEMINAR ON EMERGENCY ROOM CARE

Changing conditions in emergency rooms across the country have made it imperative for the practicing physician to be aware of the best principles and practice of emergency room care. One indication of the general realization of this was an informal poll of Kent County and Sussex County physicians by the Education Committee of the Delaware Academy of General Practice which showed emergency room care high on the list of subjects about which physicians felt a need for more information.

To meet this need, the Delaware Academy of General Practice, in cooperation with Eli Lilly and Co., has planned a two-part seminar on emergency room care.

This will be held on two consecutive Sunday mornings, October 25 and November 1, 1964. The first will be in the Holiday Inn, on Route 13 (DuPont Highway) Dover, and the second will be in the Shawnee Country Club, a short way south of Milford on Route 14.

The faculty for both of these sessions will be Dr. Walter J. Levinsky, associate professor of medicine, Temple University, and Dr. Vincent W. Lauby, assistant professor of surgery, also at Temple. Dr. Levinsky and Dr. Lauby have been engaged in a study of emergency room care for Temple University Hospital, and will talk about their recommendations.

Each session will begin with a breakfast at 10:30. The educational session will begin at 11:30, and will consist of an hour and a half's discussion by the faculty, to be followed by 30 minutes of discussion from the floor, with a 1:30 p.m. adjournment.

Registration fee will be $2 per session, including the cost of breakfast. Four hours Academy of General Practice Credit has been granted. All physicians in Delaware are welcome.

PROGRAM

SUNDAY, OCTOBER 25—DOVER

10:30 Breakfast

11:30 Medical Management of the Non-Responsive Patient

Management of the Acute Surgical Emergency

Walter J. Levinsky, M.D.
Vincent W. Lauby, M.D.

1:00 Floor Discussion

1:30 Adjournment

SUNDAY, NOVEMBER 1—MILFORD

10:30 Breakfast

11:30 Management of Cardiac and Other Medical Eemergencies

Further Acute Surgical Emergencies

Tetanus: Its Medical and Legal Aspects

Dr. Levinsky
Dr. Lauby

1:00 Floor Discussion

1:30 Adjournment

In Brief

Personal Glimpses

Joseph W. Abbiss, M.D., has been elected a Founding Fellow of the recently formed British College of Pathologists . . . McHenry Peters, M.D., was a judge at the State Science Fair . . . Society members presiding over the sessions for the Sixth Regional Meeting of The American College of Physicians to be held at the Delaware Academy of Medicine, Saturday, October 24 are: Drs. A. Henry Clagett, Jr., Gerald A. Beatty and Lemuel C. McGee; member speakers on the program will be Drs. Robert L. Meckelnburg, Dewey A. Nelson, William J. Holloway, Robert L. Wuertz, George E. Voegele and Leonard P. Lang . . . Robert L. Dewees, M.D., is general chairman of the program . . . G. Dean MacEwen, M.D., will present the cases for discussion by guest consultants at the 1964 Fall Seminar of the Alfred I. duPont Institute, Saturday, October 31 from 9:30 a.m. to 4:00 p.m. . . . Assistant Executive Secretary, Jeanette Westfall, became Mrs. Merton A. Berger on September 17th . . .

The Month In Washington

Physician ownership of pharmacies is ethical as long as the patient is not exploited, the AMA told Congress. "The ownership of a pharmacy by a physician cannot in itself be equated with exploitation," testified R. B. Throckmorton, AMA general counsel. "It would be a disservice to the public and to the medical profession if from these hearings there issued the unwarranted impression that physicians could not be trusted to own pharmacies or to carry on their professional practices in other more important respects without exploiting their patients."

Congress sent to the White House a record $1 billion budget for the National Institutes of Health. Congress approved $222.6 million for the Hill-Burton program of federal aid for hospital construction; $110.8 million for federal aid to medical education and $8 million for tuberculosis control activities.

A five-year, $283 million program of federal aid to spur the training of nurses was signed into law by President Johnson.

Brief Briefs

- The Office for Dependents Medical Care reports that in the last six months of 1963, Delaware physicians filed 492 claims for services under the Medicare Program amounting to $34,439. Three hundred thirty-six hospital claims amounted to $43,425. This latest report brings physicians' claims for all of 1963 to $64,607.
- The search for virus particles in the blood of leukemia patients has been a logical application of a discovery made three years ago—that causative viruses could be recovered from the blood of leukemic laboratory rats. New clues to the possible role these viruses play in human leukemia are described in four scientific reports in the *Journal of the National Cancer Institute, September issue.*
- Recent figures showing percentage of national civilian propulation with some form of voluntary health insurance as of December 31, 1963, list Delaware among the 20 states with over 75% of its population covered.

ROSTER OF NEW MEMBERS

MEDICAL SOCIETY OF DELAWARE

September 1, 1963 — September 1, 1964

SUPPLEMENT TO 1963 ROSTER

New Castle County

Name	Address	Specialty	Tel.	School	Lic.	Joined
Alzamora, Rafael E.	Professional Bldg.	S	OL 6-0707	Central of Ecuador, 1955	1963	1963
Bales, Lidia	1109 Rodney St.	P	OL 5-0866	Buenos-Aires, 1954	1963	1964
Bonatti, William D.	Professional Bldg.	OPH	OL 6-8571	Jeff., 1959	1963	1963
Dunn, Paul F.	2013 Baynard Blvd.	CHP	OL 4-2414	Jeff., 1941	1963	1964
Ferris L. William	Professional Bldg.	U	OL 8-7154	Tufts, 1957	1963	1964
Flinn, Robert B.	Delaware Hospital	IM	OL 4-5111	Hopkins, 1956	1963	1964
Gehret, John F.	1007 Park Place	OBG	OL 6-8422	Penn., 1959	1960	1964
Gibbs, Martin	Professional Bldg.	NS	OL 4-8835	Basle, 1956	1963	1964
Hilty, George R., III	Professional Bldg.	PD	OL 8-4285	Tufts., 1955	1956	1963
Kimura, Kazuo K.	Atlas Chem., Inc.	PD	OL 8-9311	St. Louis, 1953	1962	1963
McGregor, Robert A.	Professional Bldg.	PR	OL 4-7661	Oklahoma, 1952	1963	1963
Mchitarian, Nina B.	204 S. Pennewill Dr., New Castle	P	EA 8-8933	St. Batory U.,	1962	1964
Meloy, John H.	207 S. Cleveland Ave.	S	OL 5-2511	Temple, 1953	1955	1964
Piendak, John S.	Professional Bldg.	R	OL 4-7765	St. Louis, 1955	1956	1964
Reese, Charles L., III	Professional Bldg.	N	OL 6-2527	Jeff., 1958	1963	1964
Russell, A. Yvonne	St. Brd. Hlth., Dover	PD	734-5711	Chicago, 1958	1963	1963
Thomas, Charles D.	Meadowood Prof. Center Kirkwood Hghwy, Newark	PD	737-2684	Jeff., 1957	1963	1963
Ulrich, Paul H.	PRR-Frnt. & French Sts.	IM	OL 8-4141	Hahn., 1929	1964	1964
Vates, Thomas S., Jr.	Professional Bldg.	N	OL 6-2527	Pittsburgh, 1955	1963	1963

Kent County

Botte, George	509 Lakeview Ave., Milford	GP	422-8223	U. Erlangen, Germany, 1949	1962	1964
Chase, James M., Jr.	113 S. State St., Dover	S	674-2440	Maryland	1957	1964
Glidden, Richardson B.	223 N. State St., Dover	OBG	674-0223	Penn., 1959	1963	1963
Helmbold, August F. W.	1113 Yearsly Dr., Dover	ADM	754-4302	Eclectic M.C. Cincinnati, 1928	1964	1964
Leitzinger, William	Professional Bldg., Dover	PD	734-7457	Temple	1963	1964
Mroz, Winfried L.	871 S. Governors Ave.	OBG	736-6481	Bonn, Germany, 1956	1964	1964
Zimmerman, Arthur F.	637 S. Governors Ave.	S	736-6166	Penn., 1951	1959	1959

Sussex County

Kaleel, Mohammed D.	Main St., Selbyville	GP	436-5554	Edinburgh, Scotland, 1960	1962	1964
Peffer, Peter	Rt. 1, Box 1000, Georgetown	P	934-9231	Louisville, 1929	1964	1963
Raycroft, Harold V.	56 Pine Reach, Rehoboth	GP	227-2115	L. I. Coll., 1913	1963	1963
Szucs, Ilona T.	701 S. Walnut St., Milford	PA	422-8867	Ludwig Max. Univ.	1963	1964

A CANDID CAMERA GOES TO THE ANNUAL MEETING

LEWES, DELAWARE • SEPTEMBER 11, 1964 *Photographs courtesy of Arthur Tormet, M.D.*

Auxiliary Affairs

ANNUAL REPORT OF THE PRESIDENT OF THE SUSSEX COUNTY MEDICAL ASSOCIATION

Now that my term of office is drawing to a close, and I reflect upon our activities, I feel this has been a fruitful and rewarding year.

Through the efforts of all of our members, we were able to obtain volunteers for the thirteen wayside stations throughout Sussex County for the Polio Foundation, sponsored by the Medical Society of Delaware. There was much expenditure of time on the part of the local doctors, the Red Cross and the Public Health Nurses, and we were gratified by the opportunity to be able to assist them.

This year we arranged a Christmas auction to be held in place of our Annual White Elephant Sale. In this way our members were able to select gifts for their relatives and friends. The proceeds went toward our A.M.A.E.R.F. fund. We raised the remainder of this fund through the sale of appreciation cards and notepaper.

We have also been participating in a Mental Health Planning project. As of this writing, there is little to report, but we hope this much needed project will take shape soon. Maybe we can, in this small way, bring a little extra joy to someone in Stockley, the Sussex County Mental Health Institute. One of our prime goals will be the distribution of gifts at Christmas time.

Quite a large part of our year was spent in revising our constitution and by-laws. They were very much outmoded, and we hoped to change them to conform with the by-laws and constitution of the State Auxiliary. This was done under the splendid leadership of Mrs. Joseph Elliott, chairman.

Our nursing scholarship program was very ably handled under the chairmanship of Mrs. Albert Wildberger. There were a total of thirty-four applicants throughout the state who were considered. Sussex County is proud to report that all who applied were approved. There were three from the Greenwood area, two received partial grants and one received full grant. Two girls were accepted from the Seaford area, and both received full grants. One girl from the Lewes area received a partial grant, and the last girl from the Milton area was eligible for a full grant.

Our year ended with a dinner t the Milford Country Club, sponsored by the Sussex County Medical Society. Our speaker was a man who was an authority on the birds of our area. His talk and slides were most informative. Our attendance was excellent, and we are hopeful that many of the prospective members who attended will join our ranks this fall.

I would like to take this opportunity to thank the following officers who so ably assisted me this past year: Mrs. Joseph Elliott, Vice-President; Mrs. John Rawlins, Secretary, and Mrs. Leland Fox, Treasurer. Through the devoted efforts of these officers and our loyal members, we have completed another successful and rewarding year.

Mrs. W. Phillip Portz, President

Delaware Medical Journal

NOVEMBER, 1964
VOLUME 36
NUMBER 11

FACILITIES FOR PSYCHIATRIC TREATMENT

• **The need for flexibility and the whole gamut of psychiatric services is stressed in setting up an adequate program for mental health in institutions today.**

Daniel Lieberman, M.D.

Psychiatric knowledge has developed to the point that we are now able to look more completely at a mental disorder in its dynamic aspects. We can assess in great measure the various sociological, genetic, cultural, physiological and inter-personal factors which enter into the development and life history of the illness. In treating these illnesses, modern psychiatry tries to use the patient's strengths and resources to help restore him to a more healthy balance. The requirements of the patient as well as his symptoms, however, tend to change from time to time as the conditions of his living change. We must be prepared to adust quickly to these changes, and even to anticipate them. It is obvious that the psychiatric procedures and techniques used must be changed from time to time. Furthermore, the facilities in which these techniques are carried out must have certain flexibility. Such flexibility will allow for maximum use of all forces that can be brought to bear upon the problems of mental disorders.

Basic Principles For Mental Health Facilities

1. Psychiatric services should be available within the living radius of the recipient. Disruption of normalties frequently interferes with the process of restoring or maintaining health.
2. Facilities and programs should be so established as to provide psychiatric treatment "as early as possible, with as much continuity as possible, with as little dislocation as possible, and with as much social restoration as possible." (These principles also apply to non-psychiatric disorders.)
3. It must be recognized that complete cure or complete emotional wellbeing is not always possible to attain. Therefore *goals* should be established for each individual that are consistent with his maximum potential. The facility wherein he receives his care and/or treatment should be the least complex necessary to meet his requirements at the time. That is to say, hospitalization is unnecessary when a nursing home situation is more appropriate, or a nursing home is unnecessary when a foster home, or the individual's own home with assistance of an appropriate nature, will suffice.
4. The existence of a psychiatric disorder does not always require the utilization of psychiatric facilities or services. When needs can be met by general health, welfare, education or other programs and services, rather than by specialized psychiatric services, this should be done. Whenever gen-

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Dr. Lieberman is Commissioner, Delaware Department of Mental Health.

eric services can adequately meet the identified needs, they are to be preferred over more specialized services. Generic services should have available psychiatric consultation, preferably from private practicing psychiatrists skilled in the field of community psychiatry.

5. No mental health facility should be constructed unless there are clearly stated objectives based on clearly defined needs. Provisions for measurement of program effectiveness and economy should be built into every mental health program routinely.
6. An adequate program of mental health services requires that the whole gamut of psychiatric services be available. To be available they must exist within the physical facility where the patient is being seen or accessible to him through arrangements made by the primary facility.
7. Psychiatric treatment services are an integral part of general medical and surgical services and every sizeable general hospital, private or proprietary should have such services. This is not to say that specialized facilities for psychiatric patients are not required also.
8. *Planning* for facilities must include the individuals who use and pay for services. Programs must be responsive to the requirements and wishes of those affected.

The Special Mental Hospital

While the future calls for the development of psychiatric treatment facilities within general hospitals, special mental hospitals will be required for some indefinite time to come. These are sponsored and will continue to be sponsored by federal, state, county and private resources. As the mental hospital becomes more diversified in its services including programs in research, professional training, consultation, public education as well as containing various transitional facilities, the possibility of various partnerships becomes an important matter. Federal-state-local financing of construction and operation, with either state, local or private administration, depending upon the community characteristics, is a desirable future development.

The size of such hospitals should not exceed that required for the local area served. In rural areas there may well be a state mental hospital serving as a regional mental health facility for several towns or municipalities. While there is nothing magic about any particular maximum size, when a hospital exceeds one thousand beds the additional administrative complexities impose a cumbersome burden. The evils ascribed to large mental hospitals are more related to factors of isolation, understaffing, overcrowding, inadequate training of personnel and apathetic attitudes rather than size of the facility. The size of a hospital ward is very important and may vary from 12 to 48 but not exceed that amount. Certain central facilities may serve two or more wards. Existing large mental hospitals should decrease their capacities as their activities become more diversified, with space being used for patient activities, research and training. The focus of mental hospital construction should shift from the bed to the service since the treatment program for most mental patients emphasizes mobilization and activity. The state mental hospital population rate which has been decreasing during the past decade, can decrease to one-half its present rate with proper support of services, even while the facilities are utilized in even greater amounts as admissions increase.

It is most important to appreciate that hospital treatment constitutes only one phase of treatment and that other facilities, including the M.D.'s office, day treatment centers, half-way houses, outpatient clinics, sheltered workshops, etc., may be necessary at one time or another.

The Community Mental Health Center

Recent federal legislation granting funds to states for the construction of community mental health centers has helped to create a feeling of optimism among the mental health advocates throughout the nation. Actually,

(*Continued on Page 244*)

A STUDY OF SELF-IMAGE EXPERIENCE USING VIDEO-TAPES At Delaware State Hospital

• The inception of a research study of self-image experience, using video-tape recordings, at Delaware State Hospital is reported by the authors. The background of this approach is sketched, and some of its potential applications are indicated.

Floyd S. Cornelison, Jr., M.D.
Theodore N. Tausig, M.D.

During the past summer, a closed-circuit television system, including a video-tape recorder, was installed at Delaware State Hospital, for use in a study of self-image experience (SIE). Skilled personnel have supervised and will maintain the equipment, and a core of experienced researchers, under the direction of a senior psychiatrist, is responsible for the conduct of the project.

In the current early stage of the work, a patient undergoes a standard interview, lasting from 5 to 10 minutes, during which his picture and voice are recorded on video-tape. Immediately following the interview the tape is quickly rewound, and the recording is shown to the patient, using a television screen and a loudspeaker. After this the patient is asked a series of questions about the self-image which he has just perceived; his responses during this second interview are likewise video-taped. This procedure is repeated several times for each patient, at intervals varying from 2 to 15 days. Prior to, and after the series, each patient has a psychiatric evaluation interview and a battery of psychological tests relating to self-appraisal. Before a patient is included in this project, written consent is obtained from him and from a responsible relative for making picture and voice recordings.

Background

It has taken many months to plan and develop the on-going program, which now has been activated. A little over a year ago, representatives of the Department of Psychiatry at Jefferson Medical College in Philadelphia and Delaware State Hospital at Farnhurst, met to discuss the the possibility of a working relationship which would be of mutual benefit and which would further the activities of each institution in research, teaching and clinical work. After a number of conferences it was decided that the goals of both institutions could best be met through the development of a clinical research program to be located at Farnhurst and staffed by personnel from Jefferson and Delaware State Hospital.

In reaching an agreement regarding this particular program it was considered desirable to design a study of behavioral phenomena which would provide an opportunity for professional staff to increase the amount of time actually spent with patients and at the same time enhance the educational activities at Delaware State Hospital. The hospital would benefit from the utilization of Jefferson faculty and staff in its research and teaching programs, and at the same time the clinical

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Dr. Cornelison is Professor and Head, Department of Psychiatry, Jefferson Medical College; Psychiatric Consultant, Delaware State Hospital. Dr. Tausig is Director of Research and Education, Delaware State Hospital; Instructor in Psychiatry, Jefferson Medical College.

research program for Jefferson's Department of Psychiatry would be expanded.

A study of self-image experience, utilizing video-taped images of patients was considered to be a suitable program. Work in this field originally had begun with motion picture studies of Cornelison and Arsenian in Boston in 1954.* The techniques had been developed further in Oklahoma and later in Philadelphia. The hospital setting at Delaware State offered an excellent opportunity to continue these investigations of psychiatric problems. Not only could specific behavioral patterns be studied in detail, but a number of patients with similar problems would be able to participate at the same time, thus affording statistical data at appropriate stages in the project.

Dr. Charles Bush, then Superintendent, Dr. Theodore Tausig, Director of Research, and Dr. Shao-Chi Yu, former Clinical Director, at Delaware State Hospital were very helpful in working out details of the initial proposal submitted to the Board of Trustees for their consideration. In October 1963 the Board of Trustees of Delaware State Hospital approved the program for this collaborative study. A research area was selected and remodeled, providing work space for the experimental procedures, the apparatus and equipment, and conference rooms. Equipment has been purchased and personnel have been recruited.

Personnel

Among those now actively engaged in this project, or who soon will begin, at Delaware State Hospital are, from the Department of Psychiatry, Jefferson Medical College: Lawrence Kubie, M.D., Visiting Professor of Psychiatry and Director of Research for the Department of Psychiatry; Alfonso Paredes, M.D., Associate Professor of Psychiatry and Coordinator of the Behavioral Studies for the Department of Psychiatry; Peter J. L. Welt, M.D., Associate Professor of Psychiatry and Head of the Behavioral Recording Unit; Freerk W. Wouters, M.D., Instructor in Psychiatry; and Edward Gottheil, Ph.D., M.D., Associate Professor of Psychiatry and Coordinator of the Educational Program for the Department of Psychiatry. In addition, Dr. Cornelison will continue to direct this program. Also from Philadelphia, Mr. Jerome Gelber is employed as a Technical Assistant.

Two Delaware professionals who participate in the self-image experience project recently have received Jefferson faculty appointmnts in the Department of Psychiatry: Theodore N. Tausig, M.D., Instructor in Psychiatry (Director of Research and Education, Delaware State Hospital); Ralph V. Exline, Ph.D., Research Associate in Psychiatry (Psychology). Dr. Exline is a member of the faculty of the University of Delaware.

Value And Significance

It is expected that applications of this video-tape approach to the study of human behavior will be developed in several areas, some of which will employ techniques of self-image experience, while others will not. In the realm of psychiatric therapy, there are at least two kinds of possibilities. First, it has already been shown, in earlier work, that self-image experience (SIE) sometimes can be a factor in the improvement of behavior. This requires further exploration, with attempts to determine what particular kinds of SIE may be most appropriate for various kinds of patients—a tailoring of the method to fit the individual. Second, it will be possible to show a recovered patient a recording of his behavior, made at the time of illness, and then to use this reflective recalling of the disordered behavior as a means of self-understanding for the patient in an attempt towards preventing relapse and promoting health.

Psychiatry, as well as the entire field of human behavior, has long needed a practical technique for increasing the objectivity of records of behavior. Most of the records of patients and research subjects have consisted of written descriptions, checklist ratings, or partial data of performance. Newer audio-visual methods, such as sound motion picture film and video-tape, make available far more information regarding the appearance, speech, facial expressions, and other movements of human subjects than do any other available techniques. As these methods are increasingly utilized, diagnostic and progress records will be enriched. It will no longer be necessary to rely solely upon verbal reports of interviews and other observers—reports which are inevitably subject to omissions and distortions. The patient's behavior during a diagnostic interview can be video-taped, thus to be available for examination and interpretation by any and all of the responsible staff, at any future time, *e.g.*, at a diagnostic conference. This record need not supplant verbal reports but should supplement and support them and permit at any time reference to the basic data of behavior. Progress records of patients can be more accurate and more complete, if they consist not only of observers' notes, but also of video-taped samples of behavior. This will require accommodations in the medical records system, but it should not present unsurmountable difficulty.

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*Cornelison, F. and Arsenian, J: A study of the response of psychotic patients to photographic self-image experience. Psychiat. Quart., Vol. 34, pp. 1-8, 1960.

The extension of SIE techniques to group interactions, both as a research tool and as a therapeutic modality, is still in a discussion stage at Delaware State Hospital, although it has been used with some success elsewhere—*e.g.*, at Camarillo State Hospital in California. Confronting psychiatric patients with their own video-taped self-images has been used recently as a therapeutic approach at the University of Mississippi School of Medicine in the psychiatric hospital service.

As a teaching method, the use of video-tape has rich possibilities. A library of behavioral pathology can be assembled, and from it appropriate illustrations can be always available for instruction of students. This should enhance the learning which takes place through lectures, conferences, reading, and even that from direct contact with living patients. Selected video-tapes can be used to guide the student in dealing with his patients, *e.g.*, to demonstrate what to look for, and then to offer a comparison for observations. At Delaware State Hospital, it is anticipated that these methods will eventually be employed in the psychiatric residency training program.

Utilization of these techniques has demonstrated that there can be rather prompt practical application of this research, in assisting the clinical psychiatrist (and perhaps also the non-psychiatrist) in his task of diagnosis and treatment, in furthering the understanding of behavior, and in teaching about mental and other illnesses as they are expressed in behavioral disorders. Physicians who are interested to know more about this research and who may wish to discuss its potentials for clinical use are invited to communicate with either of the authors, or with the Superintendent or Clinical Director at Delaware State Hospital.

CLINICAL CENTER STUDY OF ACROMEGALY

Patients with acromegaly are desired for a study currently in progress at the Clinical Center, by the National Institute of Arthritis and Metabolic Diseases. The disease is characterized by enlargement and thickening of the hands, feet, and facial features, as well as by the generalized visceromegaly, glucose intolerance, and loss of body fat. Growth hormone, produced in excess by pituitary adenomas is responsible for these characteristic changes.

A new specific assay of plasma growth hormone has been developed for acromegaly permitting early diagnosis in doubtful cases and objective evaluation of progression and of the effects of treatment.

The referring physician may elect to treat the patient himself or to have NIH administer treatment. Diagnostic studies before and after treatment will require several weeks. Physicians desiring patients considered for this study may write: Jesse Roth, M.D., Clinical Endocrinology Branch, National Institute of Arthritis and Metabolic Diseases, Bethesda, Maryland.

UPROOTING PHENOMENA IN WAR BRIDES WITH DEPRESSIVE AND PARANOID SYMPTOMS

• A look at unhappy war marriages wherein neurotic personality patterns and a diversity of backgrounds suggest these alliances might have failed under normal circumstances.

George E. Voegele, M.D.
Hans J. Dietze, M.D.
Robert G. Thompson, M.S.W.

Social factors are etiologically important for the development of not only the normal psychological situation of an individual but also the abnormal one. The interaction between social factors and psychopathological symptoms in the individual is an interesting social-psychiatric problem. Every social situation creates specific physical and psychological conditions which in turn effect not only the individual's physical but also his emotional health. The "uprooting" of people (a term first introduced by Kraepelin) which has become increasingly common in our time, is an illustration of such a stressful social situation which may cause psychiatric symptoms. An interesting example of such "uprooting" phenomena can be studied in the situation of war brides—foreigners who, as a sequel of World War II and post-war conditions, entered into a marriage with American armed forces personnel. To our knowledge, there are no professional evaluations of the war bride phenomenon except for a few sociological studies after World War II, and some newspaper reports. The motion picture industry utilized the subject in the film "I was a Male War Bride."

Already after World War I approximately 10,000 marriages between American servicemen and foreign women, especially of French and German origin, were counted.[1] During World War II, 112,000 American servicemen married foreigners during the actual war time and the ensuing occupational period. By the end of 1948, 112,882 foreign war brides and 322 foreign war husbands had entered the United States; the brides came from the following countries (listed according to frequency): United Kingdom, Italy, France, Australia, New Zealand, Canada including Newfoundland, Germany, China, Belgium, Poland, Mexico, the Phillipines, Austria, Ireland, the West Indies and Greece, with the English speaking countries accounting for more than half.[2] We have not found any figures covering the Korean War nor the still continuing foreign assignments.

Probably the majority of these international war marriages have been successful and lasting. The love for her soldier husband gave the well adjusted woman the "special degree of fortitude to leave home to join a comparatively strange man in a completely strange land."[3] This resembles the pioneer attitude of the early American settlers, when it was not easy to go home to mother and when returning home would have meant to admit to oneself and to others that one is a failure. But in many of these marriages difficulties soon arose, making life for wife and husband unhappy, leading often to divorce and sometimes to psychopathological reactions in one or both.

Like the theatrical counterpart, "Madame Butterfly," this minority of unsuccessful in-

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Dr. Voegele is Superintendent; Dr. Dietze is Clinical Director, Governor Bacon Health Center, Delaware. Mr. Thompson is a Social Worker at the Perry Point Hospital, Maryland.

ternational war marriages quite often receives much attention without mentioning the majority of the successful and happy ones, wrongly generalizing that international war marriage per se is not a workable institution. Realizing that, we intend to discuss only the unhappy international war marriages between members of the United States Armed Forces and foreigners, in which the brides developed depressive and/or paranoid symptoms. War brides with psychopathy as the main psychopathology are not included. The present paper is part of a larger study which will be published later. It is based on our observations in several European countries at the end of and following World War II and in Japan and Korea during the Korean War, and on 29 cases which were referred for psychiatric or casework treatment to us, either in Delaware or Ohio from 1954 to the present time. (Fourteen of these patients were treated as hospitalized patients, twelve as outpatients and four in casework.) We also utilized experiences of other psychiatrists and social workers as related to us.

Selective Factors

"The actual rate of intermarriage was comparatively low; the rate probably did not exceed 2 per cent of the unmarried males serving overseas."[2] Seemingly there was a selective factor at work in those few who did marry, as they did so against all the pressure brought against such a marriage from other soldiers, service regulations, their respective families, and from the differences in age, social class, allegiance, language, social and cultural background. In the United States, as in the cultures of the homelands of the brides, "the endogamous norms prescribe that persons should marry within their own race, religion, nationality and social class. These norms are enforced by a number of formal and informal social controls, including laws, conventions and customs of the primary association of home and neighborhood."[2] In a mature (war) marriage these forces do not necessarily destroy a marriage; on the contrary, they can even strengthen it. But in a marriage of immature and maladjusted people these factors are apt to make it unhappy or finally to destroy it or the partners.

These international war marriages started in the emotionally charged atmosphere of war and post-war conditions where "vast indifference toward life became widespread, immense craving for enjoyment and an uninhibited self-indulgence" reigned, to quote Jaspers,[4] who reports that such phenomena are common in the histories of social upheavals and wars.

Contributing Conditions

Both soldiers and girls had in common the extreme mobility of their position, the soldiers due to their military status, the girls because of war and post-war disorganization of the area in which they were living. "The chief disorganizing effect of mobility is that it individualizes the person by detaching him from his family and other personal associations. This takes place 1) by the interruption of communication with family and friends, 2) by bringing the person into communication with those engaging in divergent practices, 3) by freeing him from primary social controls over his conduct, 4) by weakening personal attachments and loyalties to his family and friends, and 5) by increasing the opportunity of choice between various patterns of behavior."[5] In such a situation people with signs of abnormal manifestations in their personality are likely to take advantage of this constellation and enter into a kind of (war) marriage bound from the beginning to end in unhappiness, divorce or mental disorder. Ortega Y. Gasset[6] in his philosophy came to the conclusion that in their choice of lovers both the male and the female reveal their essential nature. From a psychiatric viewpoint, Jung[7] sees it as follows: "The man in his choice of a love object often succumbs to the temptation of wooing the woman who best corresponds to the particular character of his own unconscious feminity." "Healthy people have an unerring instinct in detecting . . . (neurotics) . . . and avoid them as sexual objects. But if lovers 'fall for' this type, it is because they have a concealed neurosis" writes Bergler.[8] Considering our war bride patients, we find unstable, immature, poorly integrated and maladjusted people, exhibiting neurotic or psychotic traits in both patient and husband. A certain type of male fell blindly victim to a certain type of female and vice versa. In other words, it is not the international war marriage which is the cause of the unhappy fate of some of these marriages, but rather the particular personality of each partner which let them marry under such conditions. They are especially unable to bear the stressful complications of an international war-marriage which creates a cumulative load of problems preventing a good adjustment. "War does not change people. It just brings out the better or the worse in them: perhaps shows, under stress, facets that in normal times are hidden in the unconscious, but leaves people basically the same."[6] Later again, in an eventual mental breakdown we can recognize more clearly the actual core of their personality.

Certain qualities had to be common to husband and wife; for example, proximity, marriageable age, loneliness and the discovery of unexpected qualities in each contrary to former beliefs and propaganda. Social pressure on both was decreased while sexual morals were weakened, freedom increased and the feeling of responsibility was reduced. As Strauss[9] said concerning his observations on American-Japanese war marriages: These couples, at the time in question, had little or "no obligations to family, to other institutions or to an occupational career strong enough to block international marriage."

Similar to Fritz,[2] we found that the majority of the men came from larger cities, rather seldom from rural areas. Half of our patients' husbands were first or second generation Americans, or members of special groups (Negroes, Mormons). The parents of the men were usually in a lower socio-economic group, the fathers mostly working class, the sons in a similar postion. The education was usually high school or less and the average age at marriage was 24 years, but psychologically they were often younger and emotionally unprepared for duty as a soldier in a foreign country. Some of them were actually teen-agers and they often needed a supplement to their symbols of security which were weakened and obscured by distance from home. Mother figures and sisters were substituted by romance and marriage; especially for the teen-agers and for the psychologically immature, marriage was a proof that they were adults. Discrimination towards women had disappeared more and more by living in a rather exclusively male (military) environment. The anonymity which the uniform gave to the men, the knowledge that no military authority would enforce responsibility toward possible consequences, the conviction that a special morality is allowed to soldiers and his relatively good financial position, made it easy to take on a relationship and eventually a marriage without much consideration for future responsibilities. The fact that as a stranger he could hide his own, often lower social background, while he could acquire a relatively good insight into the girl's background, made his advances towards them even easier. Reinemann[40] in his observations of 200 cases of war veterans in domestic court relations says: "The group is composed of persons whose marriage under any circumstances was predisposed to encounter difficulties. The military history of the husbands showed a high percentage of lack of stability to such a degree that they were not able to measure up to the exigencies of military life." Salmon[11] suggests "To some extent the men who married overseas may have been those who were less stable, less well adjusted in general." Of the husbands of our patients, only one was satisfactorily adjusted. All others were immature, anxious, indecisive, or inferior feeling individuals, frequently passive, dependent and feminine. Some of them very well could have been hospitalized upon the basis of the symptomatology they presented.

Cultural Identification

All the war brides have been exposed to the changes of war and post war times in their home countries, which shattered many or all spiritual and cultural values. The result was a cultural crisis with widespread social and personal disorganization, effecting a collapse of cultural identification with corresponding changes in ego ideals and superego formation. The girls usually also came from medium or larger cities. But contrary to their male partners, they came partially from a comparatively higher socio-economic background, namely from the middle class or from the pre-war middle class. The latter position lost by war destruction, by being expelled from their home as refugees or as displaced persons, or lost by the death of the wage earning member of the family. These girls often were living alone or with another girl in a similar position. They were, on the average, in their early twenties and their educational background corresponded favorably to that of the soldiers, but sometimes were interrupted or changed by the impact of war. Being emotionally immature, they felt rather tired of the deprivations and frustrations of war and post-war sequelae with resulting insecurity. The impressively strong economic possibilities of the American soldiers, together with the desire for adventure and the wish to experience the Hollywood version of the United States, seemed to offer security and escape from their war torn homeland. As it always has been, the uniform as male symbol was a special attraction to the girls (as it is to the boys, too), and there was also a shortage of males of marriageable age in Europe during the war. This became especially threatening to a girl and forced her to marry an American soldier, especially if she had been closely involved with and left by one of them before. Compared to the soldiers, for the girls marriage was often like gambling because they had inadequate or no knowledge at all of the soldier's background at home and his socio-economic status there. Pregnancy per se must not be overstressed as the cause of marriage. Often it was, more often apparently it was not (e.g. in Germany there were 37,000 illegitimate children fathered by U.S. soldiers, according to Neumayer;[12] whereas Lobsenz[13] estimated their number at 85,000, the respective numbers for Great Britain at 35,000 and for Asia 10,000).

As soon as, or even before the marriage was consummated, stress and strain appeared. There were at first the usual problems which confront all newlyweds. Normally these help to bind them together and make their marriage stronger, but in the emotionally unstable marriages they work in the opposite direction. Often the marriage was undertaken rather hastily so that it was really a marriage of strangers without acquaintance through normal courtship and engagement. As it frequently happened, a separation due to the military duties of the husband soon after the marriage did not contribute to form a strong bond. This separation easily led to an idealization of the other partner which resulted in a disappointment when they had to face reality aspects of being husband and wife together again. Overseas they had not paid much attention to the great differences in the background of their personalities as this relationship had been formed on a relatively uninhibited emotional basis. Sometimes they lived together for varying lengths of time before the marriage, without much caring for external forces and influences, but most of the partners had in the back of their minds some fears, doubts, and conflicts about marrying strangers. When the couple became settled and expected to live a conventional type of married life, the guilt feelings concerning their former behavior became stronger, as the problems became more accentuated.

There was the language difference (for brides from English speaking countries did not encounter as much difficulty). It is worth noting that the authors have not seen a war bride from an English speaking country as a patient. The observations of Fritz[2] that war brides of English speaking origin tended to go into the higher socio-economic classes offers an explanation: there would be less cause for stress on a financial level and also their greater cultural similarities would help them to overcome the problems of adjustment in America more easily. In mixed racial and mixed religious marriages, there was the added stress of adjusting to the problems arising from the fact of being married to a partner of a different race or faith, the impact of which was not fully appreciated until after living in the United States. There was the problem of the sexual adjustment on which the happiness of the marriage depends to such a great deal. Positively, there exists a correlation in marriage between its happiness and the sexual adjustment of the partners. All of our war brides patients, and some of the husbands, had difficulties in this area.

After arrival in the United States, the

couple felt the full impact of the adjustment to civilian life. The uniform-wearing hero became a job-hunting civilian, at least relatively untrained due to his long military service. A "marked intolerance of irregularities in the social order, irritability and difficulties in work adjustment were common."[14] As is generally the case in intermarriage, "too sudden and too great rupture of ethnic bonds"[15] was dangerous for the wife. The expected roles as husband or as wife were often quite different from what was considered the rule in the wife's homeland. It was difficult for the war bride to enter into the husband's family successfully, to accept his devotion to his mother in the "mother centered American culture," to use F. Alexander's[16] term. It was hard for her to establish a feeling of belonging to her husband's friends, to neighbors, and to the community. She had to take America for what it is, in many ways better than her war torn homeland, but by no means as she often imagined in her phantasy, blinded by Hollywood films, overseas military service abundance, and childish hope for endless blissbulness. Even her own children became different, refusing to talk in the mother's native tongue, or being teased by playmates concerning her.

As all the successful war marriages have proved, these obstacles can help to make a marriage stronger and more happy. But what if this marriage was already based on weak foundations, when it in itself was already an expression of personality defects and neurotic traits? To quote Weinberg,[17] "The marginal individual who is on the limb or margin of two cultures may experience acute conflicts and feelings of isolation, which he may be unable to resolve."

So, many of these "war brides" today are divorced, separated, left by the husband or have left him; some have returned to their native country; some live in a marginal social adjustment on their own; some live at public expense on welfare and other agencies. Some responded to this rather violent transition in mental and social life with psychopathological reactions, under the stress of maintaining emotional homeostasis. When latent or repressed psychological factors proved too great for their ego-resources, they developed psychopathological symptoms.

In our experience these war bride patients show primarily two types of illness: depressive reactions and paranoid reactions. Most of them show an underlying personality disorder. However, we excluded those war bride patients with clearcut psychopathy. In those cases, the psychopathic problems existed already long before they met the soldier-husband, and came to the States. The war bride situation could hardly be considered as an important etiological factor. In the cases we have been able to observe and treat, we have seen that the psychopathological reactions depend on several factors. One is the personal vulnerability which is shown by the particular premarital and premorbid personality structure and marginal neurotic adjustments that these people have made before marriage. Second are social-economic forces which had impinged on them due to the events of the war and post-war period. These had increased the vulnerability of these patients by driving them into a direction which proved harmful to them finally, namely leaving their country and marrying a person of different cultural background. Basically, the marriage in these patients must be considered an escape mechanism in which these women try to escape a seemingly unbearable economic and social situation. With such an increased vulnerability, they came to a new country where they were ill equipped to adapt themselves into a situation that was strange to them and for the adaptation to which they did not have enough mental resources. Conflicts between passive and aggressive needs became more intensified when faced with the difficulties of adjusting to the new environment, and the girls regressed to a more dependent and immature level of existence. They felt out of place in the new environment and were not able to successfully overcome this problem. Being unfamiliar with the customs in the new society, the war brides often experienced hostility or if not that, then at least they were ignored and one of the basic human drives, that of socialization and communication became blocked, thus increasing anxiety in the person involved. Now the phenomenon of "uprooting," a form of "alienation," came into play. May and Voegele[18] describe this "alienation from society," which cuts an individual off from the social cohesive forces which give shelter and a feeling of belonging. The result is social loneliness, which in turn creates anxiety, a fertile subsoil for the development of psychopathological symptoms. "When people are transplanted to surroundings which use a different system of communication, these people become temporarily or permanently maladjusted," says Ruesch.[19] To cope with the situation, the above two mentioned psychological defenses appear. Participating factors were: final insight into the unalterable situation together with intensive feelings of frustration, disappointment, guilt, hostility and aggression introjected. This resulted in the picture of an uprooting depression. Buerger-Prinz[20] has described the mechanism of the uprooting depression which appears after the loss of long cherished goals and changes of habitual environment and social condition. This type of depression belongs to the affective reactions of the psychogenic or psychoreactive type.

In general, it must be understood as a severe let-down or depressive reaction after a patient is moved from a familiar environment and placed into another, which is unfamiliar and perceived as unfriendly and often hostile.

An even further regression to paranoid defenses ensues when the depressive mechanism was not successful enough. Together with the feeling of frustration and defeat, an inner defensive attitude, "I'm not that bad," looks for an explanation for the failure in the environment. The hostile impulses are not turned against one's self but against others. Even personal shortcomings are projected onto the environment. This paranoid reaction is a further step in the personality disintegration.

In some way, the paranoid psychopathy in the war brides resemble the so-called "aliens' paranoid reaction,"[21] which was first described under the term of "Persecutory delusion of lingually isolated persons" by Allers.[22] Schneider[23] extended Allers concept and included sudden bewildering environmental changes, all of which factors contributed to the genetics and dynamics of the paranoid reactions in our war-brides series.

We have observed in all our war bride patients as the main symptoms features of one of the two types of psychopathology as described, mostly in combination. We believe that this symptomatology is related to the particular premarital and premorbid personality structure of this selected group and to the particular situational and environmental factors, cultural values and social relations this group was exposed to, before and after coming to the United States. The reason why some persons going from one country to the other or being uprooted show a depressive and paranoid reaction and others not, may be explained on the basis of a different constitution which would make one person more vulnerable than the other. Different stimuli trigger off such a reaction and they would only have to be weak when there is a strong constitutional component present, while strong stimuli are needed, if there is only a weak constitutional tendency towards mental decompensation. We see in these unsuccessful war brides a group which is comprised of certain personalities and neurotic types and therefore was selected by their later husbands, which as a group show similar traits. Their symptomatology became of morbid degree under the stress and strain of cultural and environmental change, which again was in some way a rather similar process to all of them. By no means do they represent a random sample of the foreign female population. One can hypothesize that their lives, had they remained in their native country, would have shown many morbid symptoms, but perhaps not of such a severe degree. Basically, their psychopathology does not appear different from the type of psychopathology seen in other psychiatric patients, but social factors of the war brides' situation, with their many cultural and adaptive difficulties, were important in the manner in which the psychopathology found symptomatic expression.

(*Continued on Page 244*)

"I WANT TO BE FREE"

• The author points out the difficulties in obtaining parental cooperation in three cases of adolescent boys who fail to establish a masculine identification and show ambivalence in their relationship to mother authorities.

Harry S. Howard, M.D.

When an adolescent gets into difficulty to the extent where he is brought before legal authorities, the usual question is, "Why did this happen?" and the frequent answer is "I want to be free" or a reasonable facsimile thereof. There are always the rather vague concepts of the roles of the family, the school, the neighborhood, etc., in the situation. Sometimes the answers appear quite clear. Sometimes they do not.

This paper, more or less, resulted from the fact that a number of adolescent boys were referred to the Mental Hygiene Clinic as a result of such difficulties and that several of them had had no serious background of difficulty. Each one of these defended himself with the concepts "I want to be free;" "I want my mother to get off my back;" "My mother always screams at me," etc. In most instances, the father was not mentioned at all, or if he was it was only as a collateral to the problem. Most of the cases had been referred by the Family Court, though occasionally other agencies were involved. Most of them were active with the Family Court or had recently been active with the Family Court. None of them had been institutionalized or was being considered for such institutionalization. All of them feared institutionalization as a result of their difficulties. One had had psychologic and psychiatric evaluation elsewhere with only brief therapy. One was the third consecutive member of a large family to be so involved on reaching adolescence. Two came from broken homes and were living with their mothers alone though one of the two saw his father occasionally.

Again, the writer wants to point out that these boys did not have the serious anti-social patterns often seen in delinquents and that their difficulties began as they approached adolescence or in early adolescence.

These cases are reported essentially because they came in "back to back" rather than because they were selected as particularly illustrative. None have so far had any significant amount of treatment. All were within the thirteen to sixteen age group.

Case No. 1

Albert was a sixteen year old white boy of average intelligence and with good interests, a native of northern France. He had previously been seen briefly at another psychiatric service agency. The chief complaint centered essentially around his hostility and negativism toward his mother as manifested by uncontrolled outbursts toward his mother and defiance of her disciplining efforts.

His earlier life was characterized by the multiplicity of mother figures and the dearth of father figures. His mother was not the principle mother figure. He had, on coming

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to this country, been placed in a convent school (again mother substitute). His mother had difficulty in involving herself in the problem. She tended to be defensive of herself and to see all of her son's difficulties as attacks on herself (in terms of consciously and deliberately creating difficulties for her).

Albert saw himself as rejected by his mother, saw his mother as needing to depend on him, while he himself revealed his antisocial attitude of wanting to lean on her at the same time demanding his "freedom." It does indeed seem that here we have the central dynamic theme of the case. The mother is unhappy in her role of having to provide economically for her children. She would like to be loved as a woman but consistantly denies this (hides her feelings) while interfering in her son's other loves (pets) and interests. The boy resents the role forced on him while clinging tenaciously to his mother, making demands for attention from her (he "has no use for girls") and insisting on his right to be "free."

Case No. 2

Carl was a fifteen year old boy of average intelligence entering, though definitely academically limited at the time he was first seen, the tenth grade. His considerable amount of truancy probably contributed to this. His last two years of school had not been particularly successful. He had failed once and been "transferred" once. He had previously been seen in a rather brief attempt at psychiatric (group) treatment which terminated when he evinced a lack of interest (a "wish to be free") and had had a number of rather complete and very adequate psychologic examinations. He had also spent a year at a preparatory school.

He is the oldest of three children. Both parents had been married before and both unsuccessfully; both were rather self-centered. A previous report discussed the parents as "being insecure" and trying to project a feeling of independency of each other." (Both were employed). The father drinks and was reported to be a lady's man. There had been several brief separations and the parents were, at the time the boy was seen, separated. The mother was educationally superior to the father. The fact, that they both worked gave them very little time together as a family.

Interestingly, on one occasion when Carl was involved with the court and a treatment program was being considered, his parents decided to move to West Virginia (their native state) and so successfully fended off an attempt by the court to involve them in a therapeutic treatment situation. Indeed this moving away occurred twice thereafter under the same circumstances. At the time Carl was seen the mother was living in Delaware and the father and brother were living in West Virginia. Carl saw himself through the eyes of authority as being incorrigible but described it in terms of "just not wanting to do what my mother wanted me to do." There was no great amount of guilt in it and no great anxiety. He verbalized that he didn't want to go to "training school" so he would change his pattern of behavior. He described her as "always screaming at me" and described himself as always screaming back. He put his relationship to his father in terms of "I don't see him if I don't have to, but also I go down there to see my brother when my mother goes." From a dynamic point of view, we see here a boy with little masculine identification with ambivalent feelings about his mother (he lived with her in preference to his father) and with a derogatory attitude toward his father and to all authority. His difficulties with authority had been progressively more serious and he was in danger of serious trouble. His manifestation of his wish to be "free" lay in his "screaming back" at his mother while at the same time clinging to her (his willingness to become involved in a therapeutic relationship which would set limits training school or previous attempts at group therapy.) It is, of course, noted that his parents were equally reluctant to become involved.

Case No. 3

Everett was a fourteen year old boy of average intelligence entering the ninth grade at the time he was first seen. He was approximately one year retarded academically. He had attended a parochial school but had expressed, when we saw him, a desire to transfer to a public school where he could be with friends. His parents opposed such a move and his school grades came down. He had previously been seen by a psychologist and there had been a limited amount of individual and group therapy.

He was the fifth of ten children. Two other children had, on reaching adolescence, been in difficulty with the authorities. One was institutionalized (with apparently good results). The home apparently had been a good one from an economic point of view. There was a considerable amount of inconsistency in the authority roles in the family with the mother reportedly behaving in an ineffectual manner and the father threatening, blustering, ruling with a heavy hand but also retreating when the going got rough. (When a plan for out-patient treatment was offered, he wondered whether just a year of institutionalization might not be better).

Everett saw himself as wanting to be free from discipline, to smoke and drink if he saw fit but required pocket money to finance this. He felt he wanted to buy his friends sodas, since they did the same for him but didn't like to serve papers to do this. Thus, on the one hand he wanted to be free to do as he chose and on the other hand he needed to be dependent to maintain his freedom.

He denied any other problem and in his so doing, one got the impression of the usual adolescent adjustment reaction. The fact that his difficulties had extended over a period of years belied this impression.

The writer has reported three of a series of acting out boys as seen from an evaluation work-up and without any consideration for treatment. The significant phenomenon of each were:

1. The (so called) adolescent rebellion with poor masculine identification with ambivalence toward the mother and mother substitute.

2. The ambivalent mother reaction with resultant ineffectualness.

3. The interaction between factors 1 and 2 (above).

No attempt was made in this paper to consider treatment or to evaluate prognosis. The writer felt that these boys were treatable but that parental involvement was necessary. Attention is called, in particular, to the difficulties in obtaining that ingredient in cases 2 and 3.

A future report on results is contemplated with an evaluation of a directive approach in group therapy in this kind of problem as its objective.

The names used in this article are ficticious and have no connection with persons living or dead.

NEW DELAWARE ASSOCIATION OF MEDICAL ASSISTANTS

All assistants and office staffs employed by doctors of medicine are invited to join the newly formed Delaware chapter of the national organization. Membership offers professional status and group benefits. It is not a bargaining agency or union; the prime aim is to serve the medical profession through better public relations and understanding of the patients' problems.

The organization meets on the fourth Wednesday of the month, September through May, in the Doctors' Conference Room at Memorial Hospital. Meeting time is 8:00 p.m. There will be a planned program of speakers and educational films designed to further members' competence.

Anyone interested in joining the group should contact Mrs. B. R. Vincent at 1202 Delaware Avenue, or Mrs. Raymond Malinowski at 3 Woodbury Court, Woodland Park.

COMMUNICATION AND FUNCTION IN THE INTAKE-APPLICATION PROCESS

of a State Mental Hygiene Clinic

> *"I believe that the true power of relationship as a possible source of help . . . does not lie in the ability to piece together intellectually the meaning of earlier experiences, so that one understands the genesis of a problem . . . Help . . . rests in the vitality of the immediate contact as an emotional experience."*[1]

Charles Rubin, ACSW

The importance of communication, an understanding of function and the meaning of process are necessary ingredients for professional growth and maturity. Although this paper will focus on these elements as they relate to the professional milieu and more specifically to the intake—application process, a common example known to most people may be helpful to the reader. The socially mature adult mother is biologically and emotionally focused on the "helpless" infant, and herself. She is aware of her function, of her role as a provider (food, breast, affection, etc.) and in turn her actions bring forth satisfaction from the offering, receiving and achieving. Thus, she is keenly related to her function. As she and the infant invite a greater living of their roles, and the relationship develops with the other, a process, a movement involving interaction takes place. The increasing awareness of this engagement from the "unknown" to the "known" is directly related to the *level of communication in the relationship.*

> *"The Agency . . . a fixed and stable structure, governing both worker and client in this relationship, presenting limits within which the worker operates and against which the client can measure and define his own need, his own will and his own powers."*[2]

The roles of the helper (the social caseworker, the psychiatrist, the psychologist, the therapist) and the person asking for the help (the client, the patient) need to become self-evident if there is to be positive change. Likewise this is so on different levels of helping and with different roles—the administrator, supervisor, practitioner, researcher, consultant, etc. Once comprehended and "structurally" defined, the lines of communication become functionally operable and a process results.

The Mental Hygiene Clinics of Delaware offer a service of evaluation, treatment and prevention of mental illness for the citizens of Delaware. Although referrals are usually made by community agencies, clergy, family physicians, etc., the clinic itself will act as the source of referral when other agencies are not available to the patient. There is a recognition of the applicant and in the final analysis it is *his* motivation and interest that is primary in the beginnings of problem solving.

Once the application has been received and eligibility established, the patient may be offered appointments for psychological testing and a psychiatric evaluation, while the Social Worker may see the patient, spouse or relative for the social history. Although all members of the clinic team are available for service to the patient, increasing recognition is being given to the professional Social Worker initiating the contact (the parent, if the applicant is a child) before other members of the team become involved. We are

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discovering that this results in a greater readiness and awareness on the part of the patient in this "new" involvement, fewer cancelled and broken appointments for the clinic, and more important, the applicant is helped to recognize and consolidate his feelings, his choice of continuing with the application, or rejecting further contacts. The individual who is referred for out-patient treatment discovers in this beginning that the professional helper will accept the patient's initial feelings of confusion, fear, and anxiety in coming. In this beginning with the clinical social worker, there is recognition of the applicant's strength, his potential, his unfruitful efforts of the past "to go it alone" without professional help. Through the social worker's engagement, the applicant is helped to assume responsibility for his decision, to make a choice of accepting or rejecting clinic services. He need not feel that he must conform, that others will make the choice for him. He can experience a feeling of dignity, of acceptance as an individual and grow through *dynamic involvement.*. He is not permitted to be "a cog in the wheel" manipulated by others. He is an individual whose dignity and desire for help with personal problems is respected. He is helped to come to grips with his wanting and not wanting the evaluation and necessary treatment, to wait if he so chooses until such time as he is ready to fully accept *his own participation* in an application—treatment planning program.

Intake—application has many definitions. One definition notes that intake is a "*Casework process during which a client makes initial connection with an agency.*"[3] Another writer speaks of "Intake workers who have the initial interviews with applicants and decide whether their requests and desires fit in with the agency's conception of its job."[4] It becomes clear that there is an emphasis on "beginnings" when we speak of intake-application. However, it is also just as clear that there is a process of involvement, a beginning, a middle phase and an ending phase, and *this* process culminates in the applicant's decision around the clinic recommendation for treatment. The applicant who has experienced an involvement in the application process, and is ready to accept a *new* engagement in the *treatment* process, must make still another new beginning, on a different level that has *deeper* therapeutic implications. Although the application process, interim waiting period and the treatment process, are "separate" processes each having a beginning, middle and an ending, the combined, the total overall process, of application, interim waiting period, and completion of treatment can be interpreted on different levels of abstraction. Thus, the total clinic process may be viewed as follows:

1. *Intake-Application Process Beginnings Phase*
    a. The patient comes to the Clinic and accepts the application process.
    b. The patient completes the necessary examinations.
    c. The patient recognizes and accepts or rejects the Clinic recommendation.
2. *Interim Process=Middle Phase*
    a. The patient awaits his beginning in treatment.
    b. The patient uses the Clinic in the interim, re: problems of adjustment.
    c. The patient receives his first treatment appointment.
3. *Treatment Process Ending Phase*
    a. The patient makes use of treatment appointments.
    b. The patient enters into treatment involvement.
    c. The patient resolves his treatment problem (s).
    d. The patient ends with treatment and the *total Clinic Process.*

Returning to the process of intake-application, the clinical social worker has a dual role—his responsibility for representing the agency and a recognition of the applicant's "own need, his own will and his own power."[5] By way of case example, we can briefly illustrate how professional help in the intake-application process resulted in a meaningful decision for the applicant and/or the family.

Case Illustration And Summation

A twenty-two year old single, unemployed, non-service connected Army veteran was referred by the family physician because of "depression . . . unusual hysterical pattern of spells, associated with poor impulse control . . . " When the applicant was seen by the social worker, he had no interest in treatment, but arrived because of "pressure" on the part of his mother. The social worker was able to draw this young man out, to engage him in his struggle for "independence" and emancipation from a female parental figure. The referral resulted from the mother's attempt to control, not from the applicant's desire for clinic help. Thus we see the motivation as coming from the mother—a continuance of the mother infant relationship pattern and with no motivation on the part of the patient for his own growth—and only an effort to shift the mother role to the clinic. Alhough the applicant rejected further help with this "family problem," the clinic respected his feelings and his decision to terminate. One month later, the mother telephoned asking that we "force" this man to come to the clinic. In passing, she added that he obtained employment, was less nervous, but she was concerned because of his decision to leave home —"I know he will not manage without me."

The social worker recognized the young man's problem in separating from the home, his guilt, but also the mother's struggle against continuing without her son in the home. She was involved in a dilemma of seeing her son as a child and denying the reality of his masculinity, his adulthood. It was suggested that she could seek help with this problem by referral to a Family Service Agency.

"Our kinship situation, it has been noted, throws children of both sexes over-whelmingly upon the mother as the emotionally significant adult. In such a situation, identification in the sense that adult becomes a "role model" is the normal result. For the girl this is normal and natural. The boy, on the other hand, has a tendency to form a direct feminine identification. But he is not destined to become an adult woman."[6]

A fifteen year old child, the product of a broken home, arrived in this country several years ago with his mother. The parent-child relationship had been destructive, hostile with several community agencies involved, including the court. The referral noted that the mother and child had been in "chronic conflict for the past three years" and it was felt that there was a possible need for institutionalization. The mother had made little use of professional help in the past by refusing to involve herself psychologically in a relationship process.

When the mother was interviewed by the intake social worker around her son's referral to this clinic for treatment, she was seductive in her manner, total in her projection, placing total responsibility onto the boy, extremely rigid, and somewhat negativistic. The professional social worker was not only able to recognize and relate to the psychological conflicts in the child-parent relationship, but also to the "old world" and cultural adjustment problems as evidenced in the "New World" environment.

The boy completed his clinic evaluation, accepted the treatment recommendation, while the mother agreed to participate, by seeing the social worker in a casework relationship.

Although the struggle with the problem of dependency—independency, love—hate, continued, within a relatively short time the mother and patient experienced brief moments of positive emotional release. The cultural restrictions of their "old world culture," in not yielding to their emotions—of affection, crying, anxiety, fear—were beginning to melt away. The patient's attitude in therapy was less hostile and there was no longer a heavy chip on his shoulder. The mother became less rigid and for the first time in years, she accepted a date with the opposite sex and discovered a new sense of self. There is much to be done in this case but the progress to date stems directly from the professional skill, help and understanding of the dynamics by all team members in the Application Process.

> *"Love and hate are not opposites. The opposite of love is indifference. Hate is love that has been changed to the other side of the coin—by thwarting."*[7]

These case illustrations are examples of the impact which is felt by the patient and/or the relative in seeking help through a beginning contact with the clinic. The individual has his own needs, has a will (no matter how weak or how strong) and has a right to his own self-determination within the confines of reality and environment. The social worker, a representative of the clinic, is closely identified to the agency function, the meaning of process, and that part of the patient that is seeking a more positive and creative change.

References will be supplied by the Journal on request.

FACILITIES FOR PSYCHIATRIC TREATMENT

(*Continued from Page 228*)

already existing federal programs are much more important for the support and growth of mental health activities. These include grants for research, training, demonstration projects, hospital improvement projects and federal grant-in-aid for the development of community mental health services.

The CMHC must be looked upon as an organization rather than a specific building or buildings. The community must carefully review existing public and private mental health resources, assess its mental health requirements, and then proceed to develop a CMHC that will help bridge the gap. The facility or facilities required will vary from community to community. The community mental health center must be closely affiliated or a part of the community health center.

UPROOTING PHENOMENA IN WAR BRIDES

(*Continued from Page 237*)

Summary

A review of the problems of unsuccessful war marriages is given, with the description of the personality pattern of soldiers and brides, which quite often gives evidence of neurotic traits.

The stress and strain of living in a new country proves too much for these war brides and a breakdown results. They feel uprooted and unwanted and show signs of depression (uprooting depression). If this defense is not successful to restore the equilibrium, then a paranoid mechanism is used. This symptomatology is seemingly related to the premorbid personality structure of the patients and to social cultural problems of the war bride situation.

References will be supplied by the Journal on request.

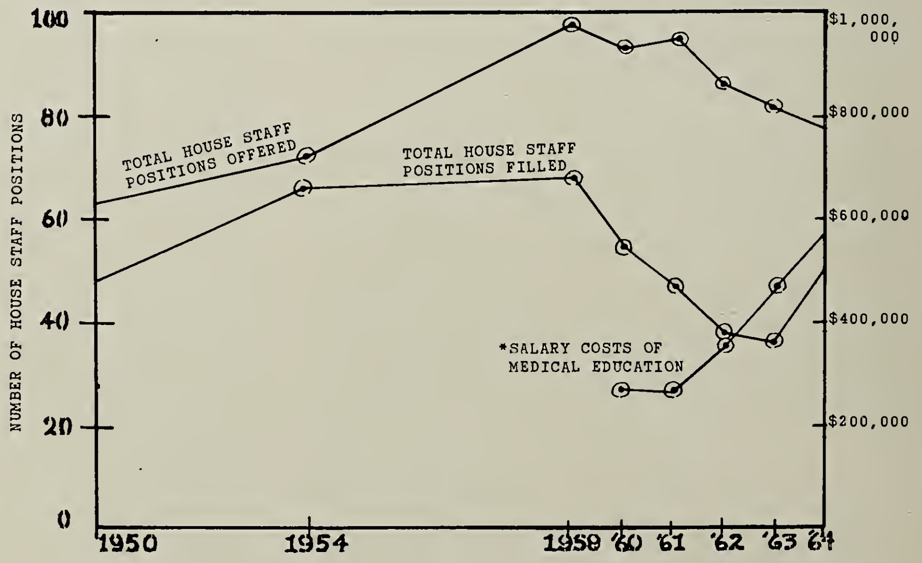
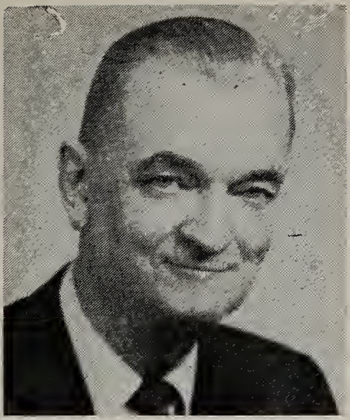


CHART I

COST AND SUPPLY OF INTERNS, RESIDENTS AND HOUSE PHYSICIANS IN THREE WILMINGTON HOSPITALS.



President's Page

MORE ABOUT HOSPITAL COSTS

Much has been said about operating costs of hospitals and of charity programs. In the State of Delaware discussion has centered upon the inadequate, outmoded method of financing the hospital care of the indigent sick.

Referring (as in last month's column) to the Wilmington General, the Memorial and the Delaware Hospital as a group, because of the consideration that is being given to merging these institutions, it is interesting to look at the cost of caring for charity patients as it relates to the total cost of operating over a period of 15 years. In 1950 the three hospitals spent $3,808,000 of which $394,181 went for charity. In 1964 the total bill was $14,383,000 and the charity charges, $2,345,000. After all income from state and county was applied, the hospitals were forced to make up a deficit of $1,400,000.

It is interesting also that in 1950 payments received from the Levy Court of New Castle County and such monies as could be diverted from the State appropriations for maintenance and upkeep balanced the total charges for free service. In 1964, however, the net cost after diverting state and county income, net charity amounts to 10% of the total operating expense of the three hospitals.

More interesting than this is a cost that has developed of necessity in providing professional service for the dependent sick. Historically, interns and residents cared for these but as the number of interns and residents available in our hospitals decreased (See chart I, opposite page) the cost of providing interns, residents and house physicians considerably increased.

The particular period under consideration is 1959 to 1964. Total house staff positions filled reached a low point in 1963, but increased in 1964. In 1960 the cost of medical education, i.e., interns, residents, directors of medical education and house physicians was $271,881 compared to $574,000 in 1964.

It is obvious that hospitals cannot continue to pay the cost of charity programs and still meet the advancing cost of educational programs for physicians unless income is derived from sources other than those used in the past.

Delaware Academy of General Practice

PROGRAM OF THE ANNUAL SCIENTIFIC ASSEMBLY

One of the main functions of the Academy of General Practice is "continuing education." Three of its efforts in this direction are open to all Delaware doctors. They are the Spring Symposium, the Fall Lecture Series, and the Annual Scientific Assembly, which this year will be on December 5 at the Academy of Medicine, Wilmington.

SCHEDULE OF EVENTS

Friday, December 4, 1964

9:00 P.M. Annual Business Meeting — Academy of Medicine, Lovering Avenue at Union Street.
Refreshments following meeting.

Saturday, December 5, 1964

Thirteenth Annual Scientific Assembly of Delaware Chapter, A.A.G.P.

PROGRAM

9:00 A.M. Registration—Visit Exhibits
Moderator — Morning Session, George J. Boines, M.D.

9:25 A.M. President's Welcome: David Platt, M.D.

9:30 A.M. *The Problems of Leukemia* — Edward H. McGehee, M.D., Chief Hematologist, The Pennsylvania Hospital.

10:30 A.M. Recess—Visit Exhibits

11:00 A.M. *Intra-and Extra-Articular Use of Steroids* — Norman O. Rothermich, M.D., Clinical Professor of Medicine, Ohio State University School of Medicine.

12:00 noon Luncheon—Exhibits

Moderator, Afternoon Session — Rhoslyn J. Bishoff, M.D.

1:45 P.M. *The Diagnosis and Management of Coronary Heart Disease* — Oglesby Paul, M.D., Chief, Division of Medicine, Passavant Memorial Hospital, Chicago, Ill.

2:45 P.M. Recess—Visit Exhibits

3:15 P.M. *Nutritional Defeciencies in Infants and Children*—Harold M. Nitkowski, M.D., Associate Professor of Pediatrics, Johns Hopkins University School of Medicine.

The above program will be supported in part by grants from Merck Sharp and Dohme, The Delaware Heart Association and the Committee on Nutrition of the Philadelphia County Medical Society.

We welcome all physicians and their wives to our annual cocktail party and dinner dance at the Brandywine Country Club at 6:30 p.m., December 5th. Tommy Carroll's orchestra will play. Tickets may be obtained from the office of the Delaware Academy of General Practice, 1925 Lovering Avenue.

Editorials

HEALTH EXAMINATIONS

In the October 26th issue of *Modern Medicine,* Walter Alvarez, whose pithy and incisive editorials are the result of a man's ability to express his ideas gathered during the course of a clinical experience unusual in this generation, berates the medical profession for advising the patient to have a checkup each year without providing the facilities.

Dr. Alvarez states that it is not uncommon in his experience for a physician to make the above recommendation to a patient only to have the patient complain that he is unable to find a physician willing or able to comply with his request. Things must be different in the mid-west. In Delaware there are many physicians willing, able, and specifically trained to perform the periodic health examination.

Dr. Alvarez finally arives at the second point—one that has been repeatedly stressed in this column. The patient fortunate enough to receive an examination spent a week or ten days obtaining tests at tremendous expense only to have the final interview with the examining physician limited to ten minutes, most of which time was spent telling the results of tests in technical language not understood by the patient.

Finding physicians in Delaware who are interested in performing a periodic health examination is not difficult. Getting the results translated into a form comprehensible to the patient remains a problem, the solution of which would do much toward improvement of physician-public relations.

CARDIOVERSION

Cardioversion by direct current countershock, especially when it is possible to synchronize the shock to a time outside the ventricular vulnerable period, is a recent and increasingly popular method of treating patients with atrial fibrillation. Cardiac catheterization studies have been used to demonstrate the basic fact that the normally beating heart is more efficient, stroke for stroke, than the heart whose mechanism is atrial fibrillation. This fact on the surface puts to shame the time-honored procedure of controlling the ventricular response with digitalis while making no attempt to restore regular sinue rhythm.

The current (November 2nd) issue of the JAMA carries a refreshing warning by the Hahnemann group who point out both the complications and limitations of this new method. They have found, as have others, that regular sinus rhythm can be restored in most patients who have had chronic atrial flutter or fibrillation. Of those converted, less than one-third remained in sinus rhythm for as long as two months. When used at the time of surgery for mitral stenosis, the results were less favorable. These results were poor despite the administration of quinidine.

Among the complications encountered, the cardiac arrhythmias were most common. Three patients with fatal arrhythmias were thought to be in a state of digitalis intoxication. The danger of embolization, a complication of medical cardioversion remains.

All told, direct current countershock as a means of cardioversion is undoubtedly a valuable therapeutic tool but like many others is a two-edged sword whose cure can be worse than the disease. We must not abuse this method but should continue to investigate its value with caution and judicious case selection.

In Brief

Letter To The President

The Delaware Curative Workshop has extended its appreciation to the Medical Society of Delaware for the equipment donated in specific recognition of the contributions of time and effort made by the Delaware Chapters of the National Foundation and the Delaware Red Cross in the polio campaign. *"Our beautiful new parafin bath arrived yesterday and has been in use a number of times; the Medco Sonolator arrived several weeks ago and has certainly been used almost constantly. We have no budget for equipment and must depend on good friends such as the Medical Society of Delaware to provide money for purchasing equipment."* Mae E. Hightower, Executive Director.

U.S. Drug Development

During the years from 1948 through 1963, 355 drugs were developed in the U.S.A., an average of 39 new drugs each year. Last year only 18 new drugs were introduced in this country. This can be attributed in part to a lack of adequately trained researchers in clinical pharmacology, according to John H. Nodine, M.D., head of the Section of Clinical Pharmacology, Hahnemann Medical College. He adds, "We are in danger of losing our leadership in this area unless we provide adequate training for the development of these new drugs."

New Epilepsy Association

The recently formed Delaware Epilepsy Association—a volunteer organization to help persons in the State of Delaware concerned with epilepsy—has been incorporated as a non-profit group with temporary officers. The Association will work for a better understanding of epileptic's problems by the general public, school and government agencies, employers and families of epileptics, and will cooperate with existing public and private organizations which can help in solving these problems. Epileptics and their families will be informed of what these organizations can do for them. Membership is open to all. The address is P.O. Box 1454, Wilmington, Delaware 19899.

NIH Booklets

An estimated 3% of the American population are mentally retarded according to a publication released by the USPHS. The booklet, "Mental Retardation, Its Biological Factors, Hope Through Research" reviews findings on brain damage—including the prevention of kernicterus—mongolism, and brain injuries incurred just before and after birth. Copies are for sale by the Superintendent of Documents, US Government Printing Office, Washington 25, D.C., for 15c each.

"Up and Around," a booklet to aid the stroke patient in learning activities of daily living has been issued by the Heart Disease Control Program of PHS. It supplements the widely-used companion booklet, "Strike Back at Stroke" (publication No. 596) which emphasizes prevention of further disability by means of proper positioning in bed, range of motion exercises and similar restorative measures. Single copies are available without charge from the PHS, Washington 25, D.C. Copies may be purchased at 50c each from the U.S. Government Printing Office.

Personal Glimpses

John A. Craig, M.D., Lewes, was a speaker at Symposium II, sponsored by the Ames Company, on Blood Volume in Clinical Medicine; his title, *Blood Volume Studies in Normal Pregnancy, Toxemia and Gynecologic Complications* . . . Winfried L. Mroz, M.D., Dover, and Andrew M. Gehret, M.D., Wilmington, addressed Home Demonstration Club health leaders —on two separate occasions—on *The Need for Prenatal Care;* both were cooperative projects of the Medical Society of Delaware and the University of Delaware . . . Marjorie Conrad, M.D., was appointed to serve as liaison to the American Academy of Pediatrics Committee on Accident Prevention . . . Robert L. Meckelnburg, M.D., spoke at the University of Delaware before Beta Beta Beta, a national biological sciences fraternity, on the subject of *Radio Istotopes* . . .

Material Available

- "A Manuel of Simple Burial," a useful reference work for physicians, contains extensive information concerning memorial societies, eye-banks and temporal bone banks, as well as other practical material on problems relating to death. The manual is edited entirely without pay, with all proceeds devoted to education. It may be ordered for $1, postpaid, from Cello Press, Burnsville, N.C.

- "Just One in a Crowd," a completely new film strip series for diabetes patient education, has been released by the Dept. of HEW. It is a six-part series presenting basic information on diabetes in colorful, easily understood form. Each fifteen minute session can be followed by a question and answer period. The film strip may be borrowed free of charge from the P.H.S. Audio Visual Facility, Atlanta, Georgia.

- Medafilm Report No. VI, featuring highlights of the AMA's Annual Meeting in San Francisco, is now available. It is presented by Schering in cooperation with the AMA's Council on Postgraduate Programs. The film is designed for showing at state and county medical societies and hospital staff meetings. You may reserve this film by writing to the AMA. Your only expense is the return postage.

- Advice on keeping families healthy is contained in a booklet published by the American College of Physicians, *Your Physician Looks at Family Health.* Material is based on presentations at a public information forum held by the ACP. Single copies may be obtained without charge from The American College of Physicians, 4200 Pine St., Phila., Pa.

Rare Blood Found

A pint of blood flown in from Johannesburg, South Africa, to Temple University Hospital contains a rare factor, identified in only three people in the world—one of whom is an expectant mother. Physicians will induce the birth of her baby because they fear that her blood, containing the rare Shapiro factor which reacts against normal blood from donors, might cause serious difficulties. Temple University Hospital will be prepared with three units on hand; one from the woman herself, one from the Johannesburg donor, and one from a New York donor.

This rare blood antibody was first discovered in a Bantu woman in Johannesburg in 1960 by Dr. Maurice Shapiro. It is known as Lu B, negative. The search for it involved thousands of hours in medical detective work and the screening of 14,802 donors in the US, Canada and Ireland.

The Month In Washington

The government has started an investigation of thousands of drugs in an effort to determine if some of them should be removed from the market. October 9, 1964 was the deadline for submission of evidence by the manufacturers that their products were effective. FDA officials expect some of the drugs to be ruled off the market as worthless and others to be required to carry changed labels. Topping the priority list are proteolytic enzymes, oral and injectable, fertility drugs, tranquilizers, iron preparations, pediatric drugs, antibiotic combinations, bioflavonoids, hormone creams, drugs used in pregnancy, antihistamines and local anesthetics.

The Johnson Administration has placed medicare at the top of its 1965 legislative program. However, the Administration was reported to be considering a program supported by a separate employer-employee tax rather than an increase in the social security tax as called for heretofore. Rep. Wilbur D. Mills, Chairman of the House Ways and Means Committee, said, "*I think one of the difficulties that has actually impeded the reaching of a sound solution is the insistence by the proponents of medical care on proceeding toward a solution through the existing OASDI (Social Securtiy) system rather than in an all-out effort to solve the problem itself with some flexibility in their approach.*"

Other points listed in Johnson's policy paper on health were:

"To step up the fight on mental health and mental retardation; to ask for increased funds for research centers, for special teacher training; to expand our program to help train the doctors, dentists and technicians this nation desparately needs; to enlarge programs of medical assistance to children of low-income families; to work to correct the deficiencies of young men who are rejected from military service because of health—and finally, to move ahead in the effort to protect the purity of the water we drink and the air we breathe. Air pollution, according to one estimate, causes $11 billion damage each year to property alone. No one can measure the damage to our children's lungs."

Heart Beats

Facts listed by the P.H.S. Services as a result of their national survey of 6,672 adults given physicals from 1959 through 1962 are: About two in every 15 American adults have definite heart disease and an additional one in nine are suspects; women are more likely to have definite or suspect hypertensive heart disease; men more likely to have definite or suspect coronary disease—or heart disease of congenital or syphylitic origin; about 24.4% of Negro adults have definite heart disease—twice as high as the incidence for white adults; a large number of persons with heart disease have more than one manifestation.

Brief Briefs

- Nearly one million more people were admitted to hospitals in the U.S. in 1963 than in the previous year. *The Health Insurance Institute.*
- The State of Delaware has 328 licensed insurance organizations. Over the entire country by state, range is from 130 agencies to 441.
- The Delaware Curative Workshop has recently established 24-hour call service for the benefit of patients and physicians. The service can be reached by dialing the Workshop's regular number in Wilmington, OL 6-2521.

New Members

Lidia Bales, M.D., Buenos-Aires University Medical School, '54, is a native of that city. Delaware license: 1963; Specialty: Psychiatry; Office: 1109 Rodney Street. Dr. Bales has three children—a two-year old daughter and two infant sons, one brand new. Her hobbies are traveling, writing, music and entertaining.

Martin Gibbs, M.D., University of Basle, Switzerland, '56, is a native New Yorker. Delaware license: 1953; Specialty: Neurological Surgery; Office: Professional Building. Dr. Gibbs is a transfer member from the District of Columbia Medical Society. Dr. Gibbs likes to "mess around in boats" and has two pre-school children—a girl and a boy.

James M. Chase, Jr., M.D., University of Maryland Medical School, is a Wilmingtonian. Delaware license: 1957; Specialty: Surgery. Dr. Chase is in practice with J. R. McNinch, M.D., Dover. He and his wife Retta have two children and the doctor's hobby is golf.

John A. Ferguson, M.D., University of West Ontario Medical School, '25, was born in St. Thomas, Canada and is a transfer member from the Ohio State Medical Association. Delaware license: 1964; Specialty: Pathology; Office: Delaware State Hospital. Dr. Ferguson has lived in this country all his life. His three grown children reside in New York and Ohio.

Hahnemann Courses Open

The following courses are being sponsored by Hahnemann Medical College and Hospital, 230 N. Broad Street, Philadelphia, Penna.:
Dec. 14-16, 1964, *The Stomach (including related areas in esophagus and Duodenum)*, Sheraton Hotel, Philadelphia, directed by: Donald Berkowitz, M.D.
Jan. 27-29, 1965, *Bedside Diagnosis of Health Disease (Part II)*, directed by: Bernard Segal, M.D.
The balance of this program may be obtained by contacting the Journal Office.

Auxiliary Affairs

Profile of Our President

Mrs. Laurence L. Fitchett

Mrs. Laurence L. Fitchett, the new President of our State Medical Auxiliary is a native Delawarean and a graduate of the University of Delware. Dr. Fitchett and Eleanor, as Mrs. Fitchett is known to her friends, met while she was a dietitian at the Milford Memorial Hospital. The Fitchetts were married in 1936, and are the parents of three grown children. David, the eldest is now a Senior student at Jefferson Medical College; Larry is a Senior at the University of Delaware, and their daughter, Peggy, is a Senior at Milford High School.

Eleanor has been a member of the Woman's Auxiliary since her marriage. Dr. Fitchett served as the Delaware Medical Society delegate for many conventions, and this enabled Mrs. Fitchett to attend numerous conventions from the onset of her marriage. Eleanor gained an early knowledge of the extensive work done by our Auxiliary women, and their dedication to the projects of the American Medical Society.

Eleanor has served continuously in an official capacity on both the State and County levels. This has been a most rewarding experience for Eleanor, and enabled her to contribute her services to a great program, to make the lasting friendship of many of the Doctors' wives, whose mutual interest and understanding of the needs of the medical profession are of primary concern.

A woman who stands at the helm of an organization is very rarely one-sided, but usually vitally interested in all community activities. Such is the case with our Eleanor. Much of her time is devoted to the Milford Memorial Hospital Auxiliary, the Avenue Methodist Church, the American Field Service, P.T.A. and the Milford New Century Club. Leisure time will find our President collecting antique pressed glass, gardening, golfing, playing bridge or taking one of their numerous camping trips with the family to visit many part of our United States and Canada.

We are all looking forward to a stimulating, active year, with Eleanor holding the reins.

AUXILIARY DATES FOR YOUR CALENDAR

The Dinner-Dance of the New Castle County Auxiliary will be held February 27 in the DuBarry Room, Hotel duPont, from 6 P.M. to midnight; music by Chuck Laskin's band. Chairman for this benefit affair (semi-formal) is Mrs. Ignatius Tikellis; Mrs. Park Huntington is in charge of decorations; Mrs. Robert S. Brennan in charge of reservations.

The Bridge-Fashion Show of our Auxiliary will be held on March 16 at the duPont Country Club. Proceeds will go towards nurses' scholarships for Delaware girls. Mrs. Robert D. Hunt is Chairman with Mrs. John M. Levinson Co-Chairman in charge of reservations. Mrs. Walter D. Davis is Chairman of the fashion show, (presented by the Purple Door) with doctors' wives as models; Mrs. I. Lewis Chipman is in charge of table decorations; Mrs. Howard L. Reed will obtain door prizes. There will also be a bake table.

Delaware
Medical Journal

DECEMBER, 1964
VOLUME 36
NUMBER 12

Proceedings of the House of Delegates

The 175th Annual Session of the House of Delegates, Medical Society of Delaware, was called to order in the School of Nursing, Beebe Hospital. Lewes, Delaware, at 7:45 o'clock p.m., Thursday, September 10, 1964, Floyd I. Hudson, M.D., President, presiding.

Secretary Abbiss took the roll call and a quorum was declared.

A motion was made, seconded and approved to accept the minutes of the 1963 Session as published in the Delaware Medical Journal.

REPORT OF THE TREASURER

Mr. President, the report of the Treasurer for 1964 is in two sections. The first consists of a statement of income and expenses for the 12 months of calendar 1963. This has been prepared by Haggerty and Haggerty, certified public accountants, and is presented with some condensation from their 1963 audit of the Society's accounts. The second section is a statement of income and expenses for the first eight months of 1964. This is not audited at the moment, since it is an interim report. The audit for 1964 will be done at the end of this calendar year.

PART I

Statement of Income and Expenses—Calendar 1963

Receipts:	
Dues	$31,162.04
Overhead contribution — Delaware Medical Journal	1,500.00
Banquet Tickets	1,140.00
Exhibit Rentals	910.00
Dividends	884.40
Interest	748.86
Collection Commissions A.M.A. Dues	134.84
Scholarship Assessment	2,080.00
Educational Grants	530.00
Miscellaneous	195.64
	$39,285.78
Expenditures:	
Gross Salaries	$10,065.00
Payroll Taxes	461.20
Hospitalization	81.12
	$18,607.32
Operations:	
Research, Legal	$ 250.00
Past Presidents' Awards	1,301.00
Journal Subscriptions	1,143.00
Committees	436.84
Contingency Expense	368.03
Audit	350.00
Remodel Offices	2,603.26
	$ 6,452.13

Office:	
Academy of Medicine	$ 2,100.00
Grants	1,300.00
Telephone and Telegraph	727.12
Stationery and Printing	892.95
Office Expense	561.32
Miscellaneous	352.49
	$ 4,633.88
Travel:	
AMA Delegate, AMA Conferences	$ 1,019.50
Local	518.17
	$ 1,537.67
Annual Meeting:	
Banquet and House of Delegates	$ 2,288.06
Guest Speakers	360.00
Printing	94.50
Stenotyping	103.00
Miscellaneous	132.41
	$ 2,977.97
Subscriptions, Contributions, Dues	$ 167.00
Scholarship Awards	2,000.00
Total Expenditures	$37,675.97
Excess, Revenue over Expenditure	$ 1,609.81
	$39,285.78

PART II

January 1 — September 1, 1964

Receipts:

	Budgeted	Present
Dues	$31,500	$31,393.50
Scholarships	2,100	2,092.50
AMA Dues	18,000	18,562.50
AMA 1% coll. rebate	180	184.28
Exhibits	700	1,195.00
Dividends % Int.	1,600	1,315.23
DMJ overhead contrib.	980	
Banquet	1,400	310.00
Reimbursed Expense		938.59
	$56,460	$55,983.60
CONTRA		
AMA Dues	$18,000	$18,562.50
AMA Dues Rebate	180	32.40
Scholarships	2,100	1,000.00
DMJ—Subscriptions	1,260	1,258.50
	$21,540	$20,853.40
WORKING BALANCE	$34,920	$35,130.20

DISBURSEMENTS

Personnel		
Salaries	$20,600	$13,725.00
Payroll Taxes	500.25	420.56
Hosp. (Steno.)	70.04	70.08
	$21,170.29	$14,215.64
Office Operation		
Contrib. to Academy	$ 2,100	$ 2,100.00
Printing, Post., Stat.	1,500	709.65
Telephone and Telegraph	750	523.32
Typewriter	460	451.00
Audit	400	375.00
Misc.	250	333.29
	$ 5,460	$14,215.64
Less Reimbursements		80.23
		$ 4,412.03
Travel and Exp.		
AMA Delegate	$ 850	$ 676.36
AMA-MSEA Conf	500	460.43
AMA-Inst.	165	134.01
Local	500	317.20
Cont.	350	318.53
	$ 2,365	$ 1,906.53
Annual Meeting		
Stenotyping	$ 150	
Printing	200	$ 236.50
Prospectus	50	61.50
Supper, House of Delegates	150	
Banquet	1,200	
Banquet Entert.	500	
Guest Speakers	450	
Rent of Hall	150	
Freight Charges	100	
Wiring	50	
Porters	50	
Clerical Help	45	
Janitorial Help	23	
	$ 3,120	$ 298.00
Subscriptions, Contributions, Dues		
AMA-Aces & Duces Dues	$ 40	$
Conference of Pres.	25	25
Medical Soc. Exec. Assoc.	10	10
Del. State C of C	50	50
Del. Sate Science Fair	50	50
Shearon Legis. Service	12.50	17.50
	$ 187.50	$ 152.50
Operations of Committees	$ 1,617.21	$ 364.97
President's Gift		$ 57.20
Addition to Reserve	$ 1,000	
Reimbursed Expense (1963)		$ 446.57
Reimbursed Expense (1964)		$ 398.23
Refund of Dues (one member incapacitated)		$ 125.00
Refund of Overpayment		20.00
Working Balance Budgeted	$34,919.71	
Disbursements (to Sept. 1)	21,994.32	
	$13,135.88	

Difference between amount budgeted and amount spent to Sept. 1, 1964

Personnel	$ 6,954.65
Office Operation	1,047.97
Travel and Exp.	458.47
Annual Meeting	2,822

Subscriptions, Contributions, Dues	35
Addition to Reserve	1,000
	$12,318.09

Respectfully submitted,
Allen D. King, M.D., Chairman

The report was accepted.

REPORT OF EXECUTIVE SECRETARY

Dr. Washburn, who is serving as historian for the Society, became impresed recently with the differences in the kinds of things the society does now as compared with 10 years ago. He discussed this with Dr. Hudson, and they have asked me to spend a few minutes telling you about what has happened in this respect, and why it has happened.

I'll be very happy to do this and, with your permission, I'll review the past year in somewhat abbreviated form and then spend a few minutes on that.

I think the Medical Society of Delaware, through its officers and committees, has given you a good year. In the 11 months since this House of Delegates last met, a number of things of definite benefit to the medical profession as a whole or to physicians as individuals have been accomplished or brought to conclusion.

The Society has implemented what was, so far as I know, the first state society sponsored Keogh Retirement Trust anywhere. It is set up to provide the maximum possible flexibility to the individual doctor, and to offer a quality of counseling and service that could be obtained only through a local plan. The service organization reports this week that deposits for the first nine months of the Trust's existence are expected to exceed $113,000. Since we expect a sharp increase toward the end of the year, as tax pictures become clearer, I cannot predict with any certainty the first year's participation. It does seem certain that the Trust will be a substantial success, which is a measure of its usefulness to the individual member.

The Blue Cross-Blue Shield group has grown to include 322 physicians and their employees and families. Annual billings are just under $50,000. This is a society administered program, with all billing and processing in the Society's office, a factor which earns the group discount for the doctor. This discount now amounts to $49.80 per doctor per year on a Plan B-extended benefits contract. Expenses of administration are born by the Society. No service charge is made.

We have also had the Society's disability benefits contract with Insurance Company of North America rewritten to provide a better benefit period with an excellent definition of disability.

While the Society does not offer malpractice insurance, this being left to the county medical societies, it is important to realize that malpractice premiums are set by the actual experience in each state. The continuing program of medical and legal screening of malpractice complaints by the State Society's Joint Committee with the Delaware Bar Association is an important factor in favorable experience which holds these premiums in Delaware to the third lowest in the country, very substantially below those of any neighboring state.

One of the Society's major goals of the past few years was accomplished with the signing into law, on July 10, of a Medical Aid for the Aged Act, completing the legal implementation of the Kerr-Mills Act in this state. It's expected that practical implementation will begin in November. This follows a time-table endorsed by the Society approximately three years ago, which called for implementation of the OAA part of Kerr-Mills and its use as a vehicle for gaining experience in establishing administrative machinery before proceeding to the more complex MAA program. The Society gave and received excellent cooperation with organized labor, the Community Services Council, and other agencies in and out of Government in the fulfilling of this schedule. It would be particularly remiss not to point out that the personal interest and active cooperation of Governor Elbert N. Carvel was a major factor in the successful prosecution of the plan.

In all, it was a good year for the Society in state legislation. Including the MAA-Kerr-Mills Law, it supported eight bills and has seen six enacted into law. Among the more tangible benefits to doctors have been new laws exempting physicians from civil liability when giving emergency care at the scene of the emergency and an anatomical act to improve hospital training programs.

We had all thought, some time ago, that mass immunization programs for polio, which occupied the Society's attention over a period of several years, would no longer be necessary. However, the advent of the live virus vaccine, coupled with outbreaks of polio in areas of the country that had had killed-virus immunization programs, made it seem desirable to immunize Delaware with Sabin vaccine, and the State Society undertook the job. This was a decision of considerable courage on the part of the Council. In previous campaigns, the Society participated in planning and administration, but was relieved of financial responsibility by the State Board of Health. This year, funds were not available to the Board for this purpose. It was clear that, in addition to vaccine and supplies, substantial amounts would have to be spent for advertising and publicity, since the public had become relatively apathetic toward polio after the sharp decline in incidence brought about by the Salk vaccine. Therefore, in agreeing to conduct the program, the Council accepted total responsibility not only for its administration, involving a major commitment of the staff over a period of five months, but for financing this campaign, relying on public contributions to make good the cost.

This was entirely successful. 209,000 doses of vaccine were given in 97 clinics. All costs were met from contributions. A surplus of over $19,000 was realized, which is being spent for medical services to children and scholarships in the health fields. Very major public relations value accrued to the medical profession. The Society is also indebted for active cooperation to the Woman's Auxiliary, the Red Cross, the National Foundation, the State Pharmaceutical Society and the State Board of Health.

The work with polio lead us into television. While it's been obvious for yearas that TV is an extremely potent public relations medium, there has simply been no opportunity to use it, since Delaware hasn't had a station. Following several profitable appearances on the then-new Channel 12, the Society produced its first original half-hour show. This was aimed at explaining to the public why the cost of medical care is rising, and how the quality of care compensates for the rise. It involved an extensive use of visuals and was generally well received. The station gives us reason to think we can do more work along this line, and we hope to be able to report increasing use of TV.

An increased use of weekly newspapers, with their rise in intense readership, has also been a public relations goal. During the past year, a health column has been provided each week to 15 such papers in the state. Nearly all use it from time to time. Some have made it a regular feature. Each column is signed as "A service of your doctor through the Medical Society of Delaware."

This past year has also seen agreement on the principles of implementing Delaware's first service prepayment contract—this is, a prepayment contract which covers, in full, the cost of basic medical care for individuals below a given income level. This will be the 65-National Blue Shield Program, jointly sponsored by the AMA and the National Association of Blue Shield Plans, for persons over 65. Agreement has taken two years in negotiation since the House of Delegates authorized the Council to begin, attacking the very fundamental issue of how a schedule of fees can be accepted as the physician's compensation when the power to set fees is in the hands of a Lay Board. Blue Shield's acceptance of a By-Law change to the effect that a service schedule cannot be altered with respect to fees, scope of benefits or level of service income without medical society concurrence as a major point of agreement.

So much for a quick review of the highlights of the past year. There could be a good bit more, as the Committee reports will show, but I am going to turn, as I was asked to do, to some more general matters.

I have pointed out before that more and more of the Society's work consists of specialized committees working on technical problems—not technical in a medical sense, but technical in that they require particular knowledge of factors that bear upon the physician and his problems in society. The intricacies of the Keogh Act and the Kerr-Mills Act, and the regulations which surround them are examples of what I mean. So are the pressures that shape union-management negotiation of health and welfare contracts, and the needs of the schools in health matters.

This trend in the Society's activities continues. It works in public health, as with the Sabin campaign; in legislation as with the Kerr-Mills implementing act; with the individual doctor's economics, as with the Keogh Trust, the Blue Cross and the insurance groups; with the profession's and the patient's economics, as with effort against unilateral administration of health prepayment; it works generally in areas where the community of physicians' interests comes together, and these tend less and less to be in matters of scientific medicine.

This has causes, and it has effects.

The two great causes are identifiable enough. With each passing year the complexity of medicine has increased, and with it the tendency for each doctor to confine himself to an area of particular medical interest. Today, there are few medical topics that are of immediate and personal interest to a majority of the membership. This makes it impractical and of dubious value to ground the program of a state medical society on a community of scientific interest, which was once the case.

This is an important change, but no more important than the change that has taken place, in the past generation, in the public's attitude toward medical service. During this time, the feeling has grown that medical care, like food and shelter, is a basic necessity of life, to be provided not as a gift but as a right. The expense is to be covered by negotiation with the employer, or by the patient himself, or, if necessary, by Government. In general, the medical profession has accepted this approach and, by its sponsorship of indigent care programs, encouraged it. However, the profession has strongly resisted the corollary of Governmental regulation, which usually accompanies status as a monopoly provider of necessities. The reasons for freedom in medical practice are good, and clear, and there is no point in going into them now. The point is that, beyond the established needs for education and scientific studies, there has arisen a need for a voice for physicians in public activity, legislation, and social and economic affairs, and society has tried to respond to that need.

The best index of this is probably the committee structure. Fifteen years ago, about half the committees of the Society dealt with disease entities, syndromes, and scientific medical problems. Today there are only two such committees: thirteen out of 21 committees deal with the place of medicine in society, or with the economics of medicine, either at the level of the individual doctor or at the level of the whole profession. There is absolutely no criticism implied. Presumably, the structure of 1950 related to the problems of 1950. It would not relate to the problems of today.

Organized medicine is, as you well know, a structured affair, with organization and spheres of responsibility at state, county and national levels. The county society has great strength in its frequent meetings of a large cross section of its membership and in its contacts with problems of emergency care, adjudication of grievances, and other things which bring the county society into direct contact with the doctor's practice of medicine.

The AMA, operating at a national level, and with a current budget of about $25,000,000, has a range of scientific and socio-economic activities for which I have only admiration. It has a record in medical education, public health and legislation that is the envy of other professional and trade groups throughout the world.

The State Medical Society could not stand effectively without the county societies nor the AMA. I have every respect for both. The fact remains that neither of these groups can focus upon the problems medicine encounters at the state level, where originate 80% of the law, the administrative regulation, and the group action that set the conditions for the practice of medicine in an organized society.

And as the medical profession has developed interests in problems at this state level, in prepayment, in legislative affairs, in the administration of health and welfare programs, in public health and immunization activities, in the doctor's financial needs, in interprofessional relations, and in public relations, the Medical Society of Delaware has undertaken to represent and act for the profession in these areas, and has modified its program accordingly.

Respectfully submitted,

Lawrence C. Morris, Jr., Executive Secretary

The report was accepted.

REPORTS OF STANDING COMMITTEES

THE COMMITTEE ON BUDGET

The Committee on Budget has met, reviewed the expenses and income of the Society for the year past and the audit for calendar 1963, and has discussed the needs of the Society for the year to come. We recommend adoption of the budget for calendar 1965.

RECEIPTS		
Dues	$31,875	
Scholarships	2,125	
AMA Dues	18,675	
AMA 1% coll. rebate	186.75	
Exhibits	960	
Dividends and Interest	1,675	
DMJ overhead contrib.	980	
Banquet	1,400	
		$57,876.75
CONTRA		
AMA Dues	$18,675	
AMA Dues rebate	186.75	
Scholarships	2,125	
DMJ—Subscriptions	1,275	
		$22,261.75
WORKING BALANCE		$35,615
DISBURSEMENTS		
Personnel		
Salaries	$21,100	
Payroll Taxes	534.75	
Hospitalization (Steno.)	70.08	
		$21,704.83
Office Operation		
Contribution to Academy of Medicine	2,100	
Printing, Post., Stat.	1,500	
Telephone & Telegrams	750	
Audit	400	
Miscellaneous	500	
		$ 5,250
		$26,954.83
Travel and Expense		
*AMA Delegate	$ 440	
AMA-MSEA Conference	265	
AMA Institute	185	
MSEA Institute	200	
Local	500	
Contingency	250	
		$ 1,840
Annual Meeting		
Stenotyping	$ 150	
Printing	200	
Prospectus	65	
Supper, House of Delegates	185	
Banquet	1,300	
Banquet Entertainment	500	
Guest Speakers	700	

Freight Charges	100	
Wiring	50	
Porters	50	
Clerical Help	45	
Janitorial Help	25	
		$ 3,370
Subscriptions, Contributions and Dues		
AMA—Aces and Duces Dues	$ 40	
Conference of Presidents of Sate Medical Societies	25	
Medical Society Executives Association	20	
Del. State Chamber of Commerce	50	
Del. State Science Fair	50	
Shearon Legislative Service	18	
		$ 203
Operations of Committees	$ 1,500	
Contingency for Committees	500	
		$ 2,000
Addition to Reserve		$ 1,247.17
TOTAL DISBURSEMENTS		$35,615

*This amount is based on an allowance of $35 per diem plus travel expenses plus an entertainment allowance for two meetings, one in New York and one in Philadelphia.

Respectfully submitted,

Allen D. King, M.D., Chairman

The report was accepted.

THE PROGRAM COMMITTEE

The scientific program constitutes this report.

Respectfully submitted,

James Beebe, Jr., M.D., Chairman

The report was accepted.

THE COMMITTEE ON PUBLIC LAWS

The Committee on Public Laws would like to report first on the follow-up of state legislation which was mentioned in the Committee's report of 1963.

House Bill 5, an act to amend Title 18 Delaware Code relating to "insurance" by redefining the term "insurance company," the intent of which is to place Group Hospital Insurance Company, Inc., under the jurisdiction of the Insurance Commissioner, is still in committee and has never been acted upon by either house.

Senate Bill 23, an act to amend Title 14 Delaware Code relating to education, by providing scholarships for students pursuing courses of education not available in this state, had been passed by the Senate but had not been acted upon by the House at the time of the 1963 report. This legislation subsequently became law. It is of interest to and was backed by the medical profession because of its provision for providing state funds, for those who qualify under the law, in the pursuit of education in the health field as well as other fields outside the state.

House Bill 377, an act to amend Title 24 Delaware Code, provided that the Court of Chancery shall have jurisdiction over any violation of the Optometric Code. Legal precedent had previously stated that the Court of Chancery had no jurisdiction over this area, either for optometry or for any other professional group. Counsel for the society questioned the constitutionality of such a piece of legislation which confined its approach to one discipline. For this reason some possibility of changing this legislation to an omnibus bill covering all professions was considered. In any event at the time of the last annual meeting this bill was still in committee but subsequently without the knowledge of the society this bill passed both houses and has been signed by the governor and is law. In essence this means that optometry now has access to civil rather than criminal courts in actions brought by the State Board of Examiners in Optometry, The Delaware Optometric Association, Inc., or the Attorney General of the State of Delaware.

House Bill 419, an act to provide unclaimed dead bodies for teaching and research purposes in approved institutions, was supported by members of the society in hearings before both houses of the state legislature. This passed both houses and has become law.

Senate Bill 61 was an amendment to the Medical Practice Act created to clarify the existing statute which seemed to make illegal for a non-medical person to use the title "doctor." This legislation was to make it legal for any person with a graduate doctorate degree to use the term of doctor, provided such use was not in relation to a health or paramedical interpretation. In the report of 1963 we mistakenly indicated that this had become law, but our present information is that this bill never had any action in either house.

Senate Bills 48 and 49, which respectively proposed the abolishment of the medical examiner system and the reinstatement in full measure of the coroner system, are still in committee and have never been acted upon by either house.

House Bill 283, a bill to exempt physicians from civil liability when rendering emergency aid at the scene of the emergency—the so-called "Good Samaritan Bill," had passed the house at the time of last year's meeting, but has since passed the Senate and has become law.

A year ago your committee reported on a request that a study be made toward developing legislation regarding the "battered child syndrome".

Considerable study of legislation in other states and model legislation submitted by the Department of Health Education and Welfare was undertaken, and conferences were held with the Department of Public Welfare here in the State of Delaware and as a result of this a satisfactory form of legislation was prepared the chief purpose of which was to require mandatory reporting by physicians and institutions of certain physical abuse of children, and to provide immunity from liability in the case of such reporting. Prior to the actual submission of this legislation, Senate Bill 344 appeared on the legislative scene which attempted to accomplish this in principle but did not meet with the standards which the society felt should be included in such legislation. These matters were discussed with Senator Evelyn Lord. the sponsor of Senate Bill 344, who agreed thoroughly to support a substitute bill submitted by the society which was Senate Bill 351. This bill passed the Senate, but at the time of this report was held up in the house in the revised statutes committee. Thus at this reporting we do not have legislation on the "Battered Child Syndrome" in Delaware.

The House of Delagates in 1963 instructed the committee to prepare and have introduced legislation requiring seat belts in passenger vehicles effective January 1, 1965. Legislation was prepared by the committee and by the counsel of the society and arrangements were made to have this legislation introduced into the Senate. A caucus of the majority in the Senate sought the opinion of the Motor Vehicle Commissioner who was opposed to legislation requiring that installation of seat belts should be a condition of licensing an automobile. A majority caucus in the Senate then expressed themselves as being opposed to such type of legislation and it was subsequently felt advisable not to pursue legislation of this type at this time. Such legislation was therefore not formally introduced and there is at this time therefore no legislation requiring seat belts in the State of Delaware.

The Committee was also charged with studying the possibility of legislation in reference to mechanical devices to reduce air pollution from automobile exhause pipes. Such stiudies were carried out and at present writing it is not considered feasible either from a technical or from an economic point of view to pursue this on a legislative basis. As the technical aspects of this improve in the future, the Committee will continue to study this as a possibility for legislation.

It may be noted in passing that in the early phases of the development of mental health legislation in Delaware, members of the committee and other members of the society worked closely with Dr. Bush in the developing of the legislation which became the framework for the existing Law establishing a mental health commissioner system in Delaware.

Senate Bill 356, an act to amend Chapter 7 title 13 Delaware Code, relating to the consent of married minors to the performances of diagnostic and therapeutic procedures, has passed both houses and is now law. This permits a married person under 21 to give consent to such procedures on himself or herself and on any minor child of such a person, thus avoiding the legal complication which has existed when the parent of such a married minor is either not available or even many miles out of the state.

The final piece of legislation of major interest was that permitting the further implementation of the Federal Kerr-Mills Law in Delaware establishing the legislative framework for Medical Assistance to the Aged. It may be recalled that in 1962 legislation was passed in Delaware permitting health care for those on Old Age Assistance, but no legislation was passed or even considered at that time for the health care of the medically indigent aged. This approach was taken by design, since Delaware had had no previous experience with any type of health program even for the indigent on a Federal-State matching basis. Experience gained during the months of operation of the program for recipients of Old Age Assistance together with the accumulation of additional information on the aged population, rendered it feasible during this session of the legislature to consider legislation on medical assistance to the aged. The Society through the Public Laws Committee was represented on a sub-committee of the Health Planning Committee of the Community Services Council, Incorporated, of Delaware, which thoroughly studied the means of implementing this in Delaware. With the help and advice of many groups, as was the case with the Old Age Assistance legislation, a legislative proposal was prepared and submitted to the Legislation. The members of the Society and others from these representative groups testified at a hearing on the floor of the House and the legislation passed unanimously. Subsequently the Senate also passed it and with the signature of the Governor the legislation became law.

It might be well to point out at this time that the Society is represented on the Medical Advisory Committee to the Board of Directors of the Department of Public Welfare. This Committee has aided in the development of the health care program which has now been operating for about two yearas for the recipients of Old Age Assistance. This Advisory Committee expects this Fall to make recommendations to the Board of Directors of the Department of Public Welfare on the details of implementation of the Medical Asnistance to the Aged portion of the Kerr-Mills legislation. It is hoped that the regulatory and administrative matters necessary to be developed will permit the full implementation of this phase by the end of the present calendar year.

The Public Laws Committee aided in the development of testimony which was submitted in the form of a statement to the Committee on Ways and Means of the United States House of Representatives, November 25, 1963, on the King-Anderson Bill. Since the hearings on this issue were shorter than they were 3 years ago the information supplied by the Medical Society of Delaware could not be presented in person.

Finally, members of the Committee, with the Executive Secretary, spent a day in our nation's capitol in the spring of 1964, and enjoyed leisurely and in depth, discussions on many issues with Congressman McDowell, Senator Williams, and Senator Boggs.

The Committee would like to acknowledge the great help afforded in its work by both Mr. Morris and Mrs. Berger. It should be pointed out that the development of legislation in the field of health can be accomplished only with the exchange of ideas between and the cooperation of interested representatives of many other groups, both professional and lay. In the past year the Medical Society has enjoyed this type of essential cooperation. In the health field, as indeed in all other fields, the best interests of the community at large are served only by the **informed participation** of the individual citizen in cooperation with the legislative and executive branches of government.

Respectfully submitted,
William O. LaMotte, Jr., M.D.,
Chairman.

The report was accepted.

THE COMMITTEE ON PUBLICATIONS

Report of the Editor

The Journal continues to have the paucity of adcertising as its number one problem. Attempts to correct this situation are being made.

The amount of scientific text that we can use in a given issue of the Journal is directly porportional to the amount of advertising. Therefore, during the past year, we have had a significant reduction in the amount of available space for text. Most of our contributors have been reasonable when this fact has been explained to them. We hope that all of our members will try to realize our problem and try to bear with us.

During the past year Doctor M. A. Tarumianz has expressed his desire to step down as Managing Editor. Doctor Tarumianz has been associated with the Journal since its origin. Although we are a small State and our Journal is one of the smallest of all state Journals, it does enjoy an excellent reputation and this is due in no small part to the long association and years of interest in this Journal by Doctor Tarumianz. I therefore recommend that the Society extend to Doctor Taraumianz a vote of gratitude for the years of faithful service and I further recommend that his name be retained on the Journal as Honorary Managing Editor.

Respectfully submitted
A. Henry Clagett, Jr., M.D., Editor.

The report was accepted.

Report of Managing Editor and Business Manager

STATEMENT A—INCOME and EXPENSE

Income		
Advertising	$12,395.08	
Subscriptions	1,756.50	
SMJAB discount and working fund rebate	104.04	
Roster Sales	32.70	
Bond Interest	87.50	
Single copy sales	7:50	
Royalties	.30	
		$14,383.62
Expense		
Printing Cost	$12,125.68	
Salary	3,000.00	
Payroll Taxes	108.75	
Printing of Roster	300.00	
Program Inserts	114.50	
Meeting Expense	218.83	
Plates	130.74	
Insurance	92.85	
Stationery	40.25	
Postage Deposit	100.00	
Addressing and Mailing	120.00	
Overhead Contribution to Medical Society of Delaware	980.00	
		$17,331.60
Operating Loss	$ 2,947.98	

STATEMENT B—SAVINGS ACCOUNT

Balance 9-1-63 (with accrued interest)	$ 9,273.70
Withdrawal	3,500.00
	$ 5,773.70
Accrued Interest	$ 282.23
Balance 9-1-64 (with accrued interest)	$ 6,055.93

STATEMENT C—ASSETS 9-1-64

Operating Account	$ 1,251.45

Savings Account	6,055.93
U.S. Government Bonds	3,502.38
Assets, 9-1-64	$10,809.76
Net Loss for the Year	$ 2,665.75

It should be noted that the Committee on Publications is the only Committee of the Medical Society which is expected to pay its way, if possible, in full and in cash. Any deficit incurred by the Delaware Medical Journal is paid not from the General Fund of the Society, but from previous earnings of the Journal itself.

On the other hand, the Journal makes material cash contributions to the operation of the Society. If the above earnings statement were rephrased to reflect items which would be made up from general revenues if the Journal did not pay them, the deficit would be reduced by $1394.50, consisting of $980 in office operation cost, $300 in roster printing cost, and $114.50 in annual meeting aannouncement notices. If, in addition, the cost of attending national meetings reasonable and necessary to the Committee's business were underwritten by the Society, as is the case with other committees, this deficit would be reduced another $218.83, for a total of $1613.33. Thus, the application to the Committee on Publications of methods applied to other committees would result in a net deficit of $1052.42.

Against the deficit should be set certain intangible values to the Society. These include the Journal's value as a communications medium within the Society; as an instrument in the training of young physicians, who can be encouraged to write and to publish without meeting the standards of national journals, an importance which may increase with the increasing emphasis on graduate training in Delaware; as a service to physicians, through increasing awareness in the medical community of what is in progress and who is involved in it, and as one of the few ethical means of calling attention to one's special interests, for the benefit of both physician and patient; as a means of establishing rapid priority for scientific publications: as an archive for the Society; and as a public relations force, in that its existence calls to the public attention that Delaware doctors are active in medical progress and the sharing of knowledge necessary for good patient care.

The Committee on Publications is taking steps to secure more local advertising, in an attempt to improve the finances of the Journal. The State Medical Journal Advertising Bureau, a national sales agency supported by Delaware and 33 other journals on a cooperative basis, has undergone reorganization. We are hopeful that this will result in an increase in national advertising. Finally, it should be pointed out that journal advertising has historically run in cycles, as the popularity of the medium rises and falls. The poor financial experience of recent years follows a period of sharply rising revenues, so that the actual financial situation of the Journal is better today than it was when the present Committee on Publications took office. While we cannot predict the length of the cycle, we are hopeful that a change for the better is not far off.

Respectfully submitted,
Lawrence C. Morris, Jr., Business Manager

The report was accepted.

President Hudson: During this year of activity our Woman's Auxiliary has done a bang-up job. We couldn't have gotten along without them in several of our projects. The Polio project with the Sabin vaccine would have been a flop if they had not been there to help us out. You could see the effects of this by what did transpire and the money we took in. In think the President of the Auxiliary had better tell you about it, and I will give you now the President of the Woman's Auxiliary of the Medical Society of Delaware, Mrs. James Metzger.

REPORT OF THE WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF DELAWARE

I am so happy to make a short report on our "Auxiliary Year."

As of March 31, 1964, a deadline for national dues, Delaware had 290 members.

Our Woman's Auxiliary to the Medical Society of Delaware had four major projects. The first was, of course, fulfilling your request for aid in the Polio Immunization Program. This involved the major part of our three county membership. We thank you for allowing us to participate. The second project was our AMA-ERF contribution, which was $1234.90, an increase over 1963. Our third project was the one which always means the most to us—Health Careers and nurses' scholarships. This year 24 partial grants in aid were given to future nurses. Our auxiliary awarded $1760.00. We also screened candidates for the Wilmington Rotary Club. Our fourth major endeavor this year has been in mental health. We planned to complete the implementation of "Milestones to Maturity" in Delaware state's high schools. The Mental Health Association supplied financial backing and we were to supply the leg-work. Hopefully this project wall be completed this fall.

I have appreciated the constant help and guidance extended by the Medical Society, the Executive Secretary, and his staff.

Thank you.
Louella McC. Metzger, President

Dr. Beatty: Mr. Chairman, I would like to say that Mrs. Metzger's report is the nicest thing that has happened to this meeting or that will happen to this meeting. I move that the report be accepted with thanks and acclamation by a rising vote of thanks.

President Hudson: We certainly all approve of that. So will everyone rise and give her a big hand. (Standing vote of applause.)

Mrs. Metzger: Thank you so much.

The report was accepted.

REPORTS OF SPECIAL COMMITTEES

THE ADVISORY COMMITTEE TO THE WOMAN'S AUXILIARY

The Committee has no report.

Respectfully submitted,
James T. Metzger, M.D., Chairman.

THE COMMITTEE ON AGING

At the first committee meeting the Committee agreed that one of the most pressing problems concerning those physicians caring for aged persons is the apparent dirth of facilities for long-term care for chronically ill or debilitated persons, often elderly, of moderate means or medically indigent. A lengthy discussion of this problem was held with invited guests who included Dr. Bush, then superintendent of the State Hospital and Governor Bacon Health Center; Dr. Voegle, presently director of Governor Bacon Health Center; heads of the social service departments of the local hospitals; Mr. Lieberman from the Department of Public Welfare; and physician representatives from the Joint Council on Aging. The consensus was that although there is a constant waiting list for beds in the existing acting facility at Smyrna, no recommendations for the proper facilities for the state can be made without careful study, survey, and consideration. The difference in the types of patients currently acceptable for admission to Governor Bacon and Smyrna was felt to be an important matter requiring more definition.

As a result of this meeting it was agreed by the social worker representatives of the Wilmington General and the Delaware Hospitals to supply this Committee with the specifics with respect to aged duration of wait, diagnosis and so forth of those awaiting transfer from these hospitals to Smyrna or Governor Bacon.

The Committee further discussed the problem in general of facilities for care of the aged of all degrees of infirmity at a meeting with various hospital administrators from New Castle and Kent County as well as the members of the Welfare Department, the consensus was that the availability of intense in and out patient rehabilitation efforts for all types of chronic illness might alter the quantity and type of chronic case beds needed. In July the Committee toured the Symrna Welfare Home and Hospital, through the kindness of the Home's new superintendent, Dr. Helmbold. A potential for expansion qualitatively (i.e. as a rehabilitation center) and quantitatively seemed very definitely to exist at the Welfare Home. Inasmuch as currently almost half of the Home presidents are from New Castle County and the New Castle County hospitals have a constant list of patients awaiting transfer to the Welfare Home, this Committee recommends that the Medical Society, state and county, continue active interest in and cooperation with the Welfare Home. As fully 8% of the residents pay the full fee for care we must urgently suggest that this Society support those interested groups who have already evinced a strong desire to change what seems an unfortunate and inappropriate name, that is, "Smyrna Welfare Home and Hospital," to something more accurate and less offensive.

A meeting with Dr. LaMaire, the new director of the Delaware Division of Aging, was held, and this Committee suggests that this state agency will serve a useful place in determining the various needs of Delaware's aged and implementing achievement of necessary services. We recommend that the Society extend its formal good wishes to the new agency and offer its advisory cooperation wherever medical affairs for the aged are concerned.

Inasmuch as one of the problems in determining availability of placement for aged ill has been the nature of patients accepted by Governor Bacon Health Center, this Committee further recommends that the Delaware Division of Aging define for us as soon as possible the present criteria for admission to Governor Bacon, the nature of the care there available, and the essential difference in patient services offered by the Bacon Health Center versus the Smyrna Welfare Home and Hospital.

In summary, it was generally apparent to the Committee that the various aspects of care for the aged cannot be arbitrarily separated into aspects solely medical. We suggest that continued efforts be made to explore and expand the facilities available for complete care of the aged ill or well. We further suggest that free exchange of ideas between all agencies and groups concerned with the care of the aged is most important and that the Society should actively cooperate with and seek active voice in the policy decisions of those institutions caring for the patients in Delaware or housing for elderly patients who may need medical care.

The Chairman wishes to express her special thanks to Mr. Lawrence Morris and Mrs. Jeannette Berger for their excellent and invaluable help during the year.

Respectfully submitted,
Bernadine Z. Paulshock, M.D., Chairman.

The report was accepted.

THE COMMITTEE ON AMA-ERF

The Committee on AMA-ERF is happy to report a most successful year. Although our fiscal year does not end until January, 1965, contributions thus far show an appreciable increase both in number of contributions and of individual contributions.

We would like to take this opportunity to thank our fellow physicians for their interest in the AMA-ERF program.

Respectfully submitted,
Joseph M. Barskey, Jr., M.D., Chairman.

The report was accepted.

THE EDUCATION COMMITTEE

I regret that this Committee has had no meetings during the past year. First of all it was appointed at a rather late date, and secondly the Chairman was unable to arrange a suitable meeting time and place. For this latter reason I accept full responsibility. What follows therefore is the Chairman's own opinion and should be treated as such.

From the standpoint of Medical Education the State of Delaware may be divided into two compartments. First of all Wilmington and its environs, and second the rest of the State. During the last several years Wilmington has made real strides in joint ventures in Medical Education. It has the facilities, medical specialists who are interested in teaching, and the financial help to eventually become a teaching center. This is in contra-distinction to the other areas in the State where sparse physician population, overwork and distances to be travelled are some of the drawbacks to any meaningful or organized educational program. And yet, medical educators will agree that the greatest problem facing medicine today is that of continuing education for the practicing physician. It is my opinion that this will not succeed by methods now in vogue. No amount of radio lectures, television broadcasts or occasional outside speaker will provide the continuity necessary for keeping the busy general practitioner abreast of the constantly changing kaleidoscope that is modern medicine. Only the opportunity to spend a meaningful period of time with teachers, in a hospital with suitable material and in an environment conducive to learning, has any chance of success. Although this is a Herculean task it is not an impossible one.

In bare outline then, a minimum requirement would provide a locum tenems for the "student physician", course material prior to his hospital sojourn, so that he might better be prepared to get full benefit from his study period, and follow up courses so that the refurbished medical education might last until his next study period. It is obvious that however nebulous this is at present, it has the germ of an idea that needs encouragement. A tremendous amount of work needs to be done before even the shape of this program takes place, many disciplines need to be consulted and much apathy needs to be overcome. All of this we can do, if as a Society we devote as much time and effort to Education as we do to the Economics of Medicine.

Respectfully submitted,
Leonard P. Lang, M.D., Chairman

The report was accepted.

THE GRIEVANCE BOARD

There being no matters referred to the Grievance Board this past year, no meetings were held.

Respectfully submitted,
Laurence L. Fitchett, M.D., Chairman.

The report was accepted.

THE COMMITTEE ON MATERNAL AND INFANT MORTALITY

There is a question of whether this Committee's efforts are being directed in the most productive way. A great deal of raw data has been accumulated which might yield valuable information if it were properly compiled. The committee has arranged to secure advice on this from a properly qualified statistician and programmer.

Since it is felt by this Committee that a major cause of neonatal mortality is the failure of 20% of mothers to have prenatal care, it would be constructive to try to educate prospective mothers about the need for proper prenatal care. This has been discussed with the University of Delaware Extension Service. The Society's weekly Health Column for rural newspapers could also be used, and Dr. Turner has undertaken to gather material which could be incorporated in the column. It was also agreed to get newspaper publicity.

The Committee is considering sponsoring a conference on maternal and infant mortality on a state-wide basis. If the feeling of the local physicians was favorable, this might be started on a Wilmington level. A factor in this decision is that individual hospitals all have neonatal conferences on the same basis. The Committee is reviewing the present information form for neonatal mortalities in order to find if more information could be included and if it could be made easier to fill out.

The Committee wonders whether more congenital anomalies are being seen than in the past. The impression to this effect may not be valid because of possible statistical bias, but we plan to explore this subject further with obstetricians. The Committee will make an effort to educate mothers who are in the hospital without having had prenatal care on the value of such care next time.

The Committee's usual analysis of neonatal mortalities will follow this report, Table I, Table II and the Summary of Death Rates.

Respectfully submitted,
Katherine L. Esterly, M.D.,
Charles R. Green, M.D., Chairmen,

The report was accepted.

THE COMMITTEE ON MEDICAL ECONOMICS

Your Committee on Medical Economics reports the institution of two new and hopefully worthwhile additions to the Medical Society's services during the past year. These have been a retirement program for physicians written to conform with the requirements of the self-employed individuals retirement act of 1962 (the Keogh Act) and a rewritten disability income policy which eliminates certain basic conflicts with the county society policies and offers longer term benefits.

The decision to implement a Keogh Plan grew from a survey conducted for last year's Committee to determine the potential of a state society-sponsored plan in terms of value to the membership and of which of several possible approaches might be useful.

The survey showed that about 32% of the membership could not be considered potential beneficiaries of a Keogh Act, due to lack of interest, type of practice, or age. Of the remainder, about 55% were estimated to have a potential for tax saving, based on income and the number of employees.

By admittedly arbitrary standards, about half of the respondents were not adequately insured. Furthermore, a comparison of net worth data with income data suggested the need for a systematic savings plan by a fairly large percentage of those who answered.

Several significant conclusions were drawn from this. First, relative net worths and the distribution of "adequate" insurance indicated that life insurance should not be a compulsory part of the plan. A further inference was made that those who did in fact need life insurance would probably make up a group too small to qualify for true group rates. It appeared, further, that capital gains treatment outside of Keogh Plan might be preferable in some individual cases to the tax averaging process of the Keogh law, so that equities too, should be available only on an individual option basis. On the other hand, group annuities, which could be written advantageously within a society plan, seemed to have a definite place in the financial picture of a number of physicians.

With this information, the Committee concluded that the retirement program of the Professional Retirement Organization, a Philadelphia-based group,

TABLE I

	Delaware	Wilmington General	Memorial	St. Francis	Riverside	Kent General	Milford Memorial	Beebe	Nanticoke	USAF Hosp.	Home	Total
Total Live Births	2522	1970	2242	707	249	816	958	438	611	876	100	11,489
Deaths in 1st 28 Days	37	34	25	17	3	22	18	12	12	8	2	190
*Rate-1st 28 Days	14.7	17.3	11.1	24.0	12.0	27.0	18.8	27.4	19.6	9.1	20.0	16.5
Deaths in 1st 7 Days	35	32	24	16	2	19	17	8	10	7	2	172
Rate—1st 7 Days	13.9	16.3	10.7	22.6	8.0	23.3	17.8	18.3	16.4	8.0	20.0	15.0
Deaths in 1st 24 Hours	23	26	19	10	1	14	7	5	8	3	2	118
Rate—1st 24 Hours	9.1	13.2	8.5	14.2	4.0	17.2	7.3	11.4	13.1	3.4	20.0	10.3
Deaths in 1st 7 Days Weight over 1000 gms.	18	13	11	10	3	11	11	7	6	6	1	97
Rate—1st 7 Days Weight over 1000 gms.	7.1	6.6	4.9	14.2	12.0	13.5	11.5	16.0	9.8	6.9	10	8.9
% Deaths Previable (500-1000 gms.)	48.6	55.9	52.0	29.4	0	36.4	38.9	8.4	33.3	12.5	50.0	40.5
% Deaths Viable Prematures (1000-2500 gms.)	35.2	35.3	32.0	47.2	100	27.2	44.4	50.0	50.0	87.5	50.0	41.1
% Deaths F.T.	16.2	8.8	16.0	23.6	0	36.4	16.7	41.6	16.7	0	0	18.4
Inadequate prenatal Care	7	9	6	1	?	5	?	3	2	0	1	35
% Inadquate Prenatal Care	18.9	26.5	24	5.9	?	22.8	5.7	25	16.7	0	50	19.6

*Rate=Deaths/1000 Live Births

TABLE II

Cause of Death	Delaware	Wilmington General	Memorial	St. Francis	Riverside	Kent General	Milford Memorial	Beebe	Nanticoke	USAF Hosp. Dover	Home	Total
Undetermined	19	20	11	8		9	3	6	3	6	1	86
Hyaline Membrane	5	3	2	1	2		4	2		1		20
Congenital Anomalies	2	4	7	3		2	2		2	1		23
Intrauterine Anoxia	6	2	1	2		2	3		5			21
Intracranial Hemorrhage	1	1	2			4	3				1	12
Erythroblastosis Fetalis			1	1		3						5
Pneumonitis	1		1				2	3				7
Meningitis	1											1
Pulmonary Hemorrhage	1											1
Placental Insufficiency	1											1
Dehydration and Malnutrition							1	1	1			3
Waterhouse Friderichsen Syndrome				1								1
Sepsis				1	1							2
Reticuloendotheliosis						1						1
Laceration of Liver		1										1
Cerebral Infarction		1										1
Hypoadrenalism						1						1
Thrombocytopenia		1										1
Myasthenia Gravis		1										1
Aspiration Asphyxia		1										1
Total	37	34	25	17	3	22	18	12	12	8	2	190
% Autopsied	57.5	57.2	65.4	25	0	40.9	44.5	50	41.6	37.5	0	50%
% Undetermined	51.3	58.8	43	47.2	0	40.9	16.7	50	25	75	50	

was the most desirable of several available plans. However, the question of whether or not any program should be written remained. This was finally resolved on the basis that the potential for group service and consideration of each individual physician's circumstances, with appropriate professional advice, justified the establishment of a local plan.

A Retirement Trust was established with the Bank of Delaware as trustee, subject to supervision of the Council of the Medical Society of Delaware. The Plan allows an individual to determine, in accordance with his needs, combinations of life insurace or anuities or United States Government Bonds or equities, Philadelphia Life Insurance Company was engaged as insurance underwriter, and Calvin Bullock, Ltd., as equity advisor.

An essential part of this program is the offering of an opportunity to physicians to understand it. Accordingly, the Committee has sponsored two meetings in New Castle County and one in Sussex County, at which professional estate planners have explained the provisions of the program. Currently, a program is underway to offer each member of the Society an opportunity to discuss the plan on an individual basis in his own office. Relatively early participation of 55 members and their employes on a scale of $113,000 indicates that a need is being met.

The Committee wants to make extremely clear that it believes no one Keogh Plan will be best for all physicians. Furthermore, it knows that many physicians should not participate in Keogh plans at all, or should not participate in a plan of the

SUMMARY of DEATH RATES for TEN YEAR PERIOD 1964-1963

		Delaware	Wlmington General	Memorial	St. Francis	Riverside	Kent General	Milford	Beebe	Nanticoke	USAF Dover	Home	Total
Death Rate In	1954	14.6	18.4	24.1	12.7	33.1	15.4	16.7	32.1	26.4		7.9	18.1
1st 7 Days	55	13.8	17.3	13.1	18.3	22.2	14.7	11.5	10.6	18.5	14.0	6.4	14.4
All Weights	56	12.1	18.2	11.1	12.3	15.8	15.3	12.3	23.4	6.7	11.5	41.2	14.5
	57	11.4	17.8	15.8	14.3	33.3	8.4	17.4	18.1	18.8	6.7	39.5	14.9
	58	13.0	20.1	20.5	20.1	20.9	15.3	14.4	16.1	16.1	15.5	57.0	17.7
	1954-58	12.9	18.5	16.6	15.7	25.0	13.6	14.5	19.8	17.1	11.9	21.9	15.9
	1959	14.5	19.4	15.8	19.2	19.6	14.8	13.5	17.6	14.7	15.0	55.2	16.9
	60	12.1	18.5	12.1	5.8	14.0	11.9	15.0	33.8	13.1	12.3	29.2	14.2
	61	17.4	17.9	17.8	17.3	17.2	15.2	14.5	28.0	15.3	16.7	38.0	17.7
	62	9.4	13.6	14.7	11.5	27.8	16.1	16.8	18.5	10.9	19.0	20.0	13.8
	63	13.9	16.3	10.7	22.6	8.0	23.3	17.8	18.3	16.4	8.0	20.0	15.0
	1959-63	13.5	17.2	14.2	14.8	17.0	15.9	15.5	23.1	14.1	13.9	35.2	15.5
	1954-1963	13.2	17.9	15.2	15.2	20.4	14.8	15.0	21.6	15.4	13.3	25.8	15.7
Death Rate In	1954	6.0	11.3	13.7	10.2	24.8	10.6	11.8	23.0	24.0			10.6
1st 7 Days	55	10.2	9.7	8.7	11.0	18.9	9.8	9.1	8.0	13.2	3.0		9.4
Weight Over	56	8.3	11.6	6.4	9.9	10.5	8.8	9.0	7.8	4.5	11.5		8.7
1000 Gms.	57	9.0	15.1	8.4	7.7	11.1	5.1	8.2	10.3	14.6	4.5	15.8	9.8
	58	8.9	11.8	10.5	11.6	10.5	9.6	8.2	5.3	13.2	8.9	25.9	10.3
	1954-58	8.5	12.1	9.3	10.1	14.3	8.6	9.2	10.7	9.0	7.3	20.2	10.0
	59	8.3	11.9	12.3	9.6	9.8	10.2	9.7	10.1	12.6	15.0	40.2	11.1
	60	9.2	12.8	7.3	3.6	14.0	6.4	12.0	23.4	7.5	10.9	12.5	9.8
	61	9.2	11.1	13.8	12.0	8.6	9.1	11.1	22.9	9.6	10.3	19.0	11.0
	62	7.0	8.6	6.4	7.2	18.5	12.3	13.8	15.8	6.3	14.6	20.0	9.1
	63	7.1	6.6	4.9	14.2	12.0	13.5	11.5	16.0	9.8	6.9	10.0	8.9
	1959-63	8.2	10.1	8.9	9.1	12.6	10.1	11.7	17.6	8.9	11.3	21.4	10.0
	1954-63	8.3	11.1	9.1	9.6	13.3	9.4	11.2	14.3	9.0	10.1	20.9	10.0

type sponsored by the Society. We strongly recommend that each physician consult his own attorney, accountant or other advisor and make his election regarding Keogh Plans only in consideration of his own circumstances.

The Society has sponsored a disability income program since 1953, written by the Bertholon-Rowland Co. with the Insurance Company of North America. Spot checks with physicians who have made claims under this policy have revealed good experience, and a general feeling that the coverage was worthwhile. However, the program had the disadvantage, common to many such policies, that its benefits were not for a period of life, and also had a premium schedule that was disadvantageous to the younger physician. Accordingly, this policy has been re-written to lengthen the disability period, and to provide a more equitable relationship between age and premium. However, this has been done with a clear understanding that any present holder of the policy will have the option of continuing the older premium scale if he so desires.

A brochure describing this policy has recently been mailed to each member. While, again, we hope that no one will participate except on the basis of his own needs and circumstances, we believe its existence will be useful for a significant proportion of the Society.

We note that 21 members have entered new applications or increased their coverage in the first few weeks of the availability of this new program.

Respectfully submitted,
Davis G. Durham, M.D., Chairman.

The Report was accepted.

Part II will appear in the January, 1965 *issue.*

The complete report of the Proceedings of the House of Delegates is on file in the Medical Society office and is available to members for reference.

QUESTIONNAIRE

Your State Society officers ask your cooperation in the completion and mailing, of the questionnaire facing this page.

Editorials

6 REASONS WHY THE DRUG NAME SHOULD NOT APPEAR ON Rx LABELS

More and more physicians are requesting that the drug name automatically appear on the prescripton label—unless they specify that it should not. There are at least 6 reasons why it is *not* advisable to automatically place the drug name on the prescription label. Here are the reasons:

Reason No. 1: The physician arrives at a proper diagnosis via a very complex procedure that earns him the respect of his patients. This complex procedure is *oversimplified* when it is reduced to merely the name of a drug on a label.

Reason No. 2: Newspapers and magazines are loaded with often-exaggerated reports on adverse drug reactions and toxicity, causing our present drug hysteria. These reports mention the names of drugs. For example, if the millions of users of Parnate and their families had recently read the exaggerated reports about the drug in the newspapers, they would have become unduly alarmed—if the name of this valuable drug had appeared on their Rx labels. The same applies to the millions of Enovid users and their families, when the public press *erroneously* linked the drug to cancer in humans.

Reason No. 3: When a patient knows the name of a drug, he or she can put pressure on the physician. For example, 2 women—both patients of a drug-name-on-the-label MD—brought in Rxs at about the same time to a pharmacy in Illinois. One inquired of the other: "What did Dr. X prescribe for you?" Upon hearing the drug name, the inquirer urged: "Don't take it. It did me no good." The other lady then phoned the doctor, and urged him to prescribe another drug!

Reasons No. 4: Even physicians who favor placing the drug name on the label often say that there are exceptions to this rule—conditions under which the drug name should *not* be on the label. When a physician makes such an exception, the patient may say to himself: "I wonder if I have a serious disease, like cancer?" . . . or "Is the doctor giving me a barbiturate or a narcotic?"

Reason No. 5:When a patient knows the name of a drug, it often leads to self-medication and to patient-prescribing for others. If the drug happens to be a "prescription only" drug and the pharmacist says that he cannot supply it without specific permission from the doctor, some people may suspect physician-pharmacist collusion.

Reason No. 6: Patients who know the names of the drugs prescribed for them will tend to price-shop—by asking for the drug by name. With all the look-alike and sound-alike drug names—coupled with the many forms and dosage strengths—the patient may get the wrong drug or the wrong strength.

To sum up the situation: The physician should retain full control of therapy in the interest of public health. When he specifies that the name of the drugs be placed *automatically* on the Rx label, he tends to lose control of that therapy. This is not in the interest of an effective physician-patient-pharmacist relationship.

SHOULD THE DRUG NAME APPEAR ON THE LABEL?

The preceding editorial is reprinted at the invitation of the Editor of the American Professional Pharmacist and lists six reasons why, in his opinion, the drug name should not appear on prescription labels. The best reason we know for putting the name on the label is when a strange physician is called to see a patient and finds numerous medications, many of which cannot be identified. If all physicians and pharmacists were on twenty-four hour call at all times, such a situation would not arise.

Your Editor contacted a representative group of physicians, general practitioners and internists. While there were one or two at each end of the spectrum, the general consensus was that desirability of labeling varies with the situation and they favored individual instructions on each prescription.

We must continue to do that which is best for our patient. This, and only this, is to be considered.

EXHIBIT I

Table 6.[1] Total expense per patient day in non-federal short-term general and other special hospitals, 1950-1963

Year	*Total Expense Per Patient Day*	*Amt. of Increase Over 1950*	*Index*
1950	$15.62		100
1960	$32.23	$16.61	206.3
1963	$38.91	$23.29	249.1

EXHIBIT II

Table 6.[2] Hospitals reporting rate beds, and average routine service charge for adult patients, by type of accommodation and by region, state and metropolitan area; non-federal, short-term general and special hospitals, November 1, 1963.

		ACCOMMODATIONS		
AREA		*Single Bed*	*Two Bed*	*Six or More Bed*
Local	Old	$24.00 - $28.50	$20.50	$16.00
Hospital	New	$28.00 - $32.00	$24.00	$19.00
New England		$30.90	$25.70	$23.10
Metropolitan		$32.50	$27.10	$24.20
Non-metro.		$26.10	$22.60	$19.50
Mid-Atlantic		$29.50	$23.70	$19.00
Metropolitan		$30.80	$24.50	$19.80
Non-metro.		$24.50	$21.10	15.20
Pennsylvania				
Harrisburg		$24.80	$19.40	$15.80
Philadelphia		$26.70	$21.60	$16.90
Reading		$25.80	$18.20	$14.90
Non-Metro.		$21.10	$17.30	$13.70
Delaware		$24.10	$20.20	$15.80
Wilmington		$24.80	$21.00	$16.50
Non-metro.		$21.10	$18.00	$14.50
Maryland		$27.30	$22.20	$21.70
Baltimore		$28.70	$24.19	$22.90
Non-metro.		$22.30	$17.80	$17.30
South Atlantic		$19.80	$16.60	$14.40
Metropolitan		$22.60	$18.90	$16.00
Non-metro.		$16.60	$13.70	$11.60
Georgia		$17.60	$13.10	$12.80
Atlanta		$20.90	$15.90	$15.00
Non-metro.		$15.10	$11.20	$ 8.80

[1] *Guide Issue of Hospitals, The Journal of the American Hospital Association (August* 1, 1964, *Part* 2)
[2] *American Hospital Association, "Daily Service Charges in Hospitals,* 1963." *Table* 6, *page* 16.

President's Page

RATE INCREASES IN HOSPITALS

During 1964 hospitals above and below the canal announced rate increases for services to patients. The Wilmington General and the Delaware are most recent, effective January 1, 1965. The Memorial Hospital established its increased charge October 1, 1964, the beginning of the fiscal year for all three of the hospitals mentioned. Cost per patient day and patient charges in these three hospitals are roughly comparable. Blue Cross premiums will not be immediately increased, but probably will be about mid 1965 if utilization is what is expected under the new charges.

The hospitals last increased room charges in 1961. The hope was expressed that in spite of consistently rising costs, particularly wages, the then new rates might cover operating expenses for two years. The hospitals did better than that. They held the line three years, or more.

One hospital administrator gives the following reasons for the changes in his hospital, in answer to my quest for reasons causing the rate changes:

1. A loss of about $300,000 is forecast for fiscal 1965.
2. The cost per patient day has advanced 23.4% (7.8% per year average) from $40.34 in 1961 to $49.79 in 1964 (fiscal year ending September 30).
3. Payroll per patient moved from $27.22 to $33.56 or 23.3% in the three years.
4. Averages were kept down slightly by the fact that patient days of care increased from 115,416 in 1961 to 121,761 in 1964.
5. While payroll costs were going up $6.34 per patient day, all other costs advanced $2.61 per patient day.

Figures for the nation are not readily compared with the above, but the "Guide Issue of Hospitals," the Journal of the American Hospital Association (August 1, 1964, Part 2) tabulates costs from 1950-1963. See Exhibit I.

The index in this table which advances an average of 10.6 points each year between 1950-1960, increases to 14.3 each year 1960-1963.

Probably if hospitals found ways to absorb costs year after year physicians would never ask questions. Most doctors would never know how the cost is met. But when charges are increased, the bill to patient goes up. The physician is one of the first to hear about it. How do charges in the hospital in question compare with similar charges in other cities and states?

Again, the American Hospital Association has just published "Daily Service Charges in Hospitals, 1963." (See Exhibit II.)

Several conclusions appear obvious to me from these tabulations, but remember, except for "Local Hospital"—these rates are 14 months old.

1. Delaware is listed as a South Atlantic State but relates more closely to the Middle Atlantic States, particularly Pennsylvania.
2. The cost of care is higher in the more populous areas, whese the hospitals tend to be larger and more extensively involved in education programs.
3. Room charges (nursing, housekeeping, food, etc.) account for only about half the bill, frequently less than half. Ancillary charges such as operating room, recovery, laboratory, x-ray, cardiography, etc., account for the balance. Although room charges are fixed, careful ordering on the part of the doctor could keep other charges at a minimum.

In Brief

Detection By Fingerprint Analysis

Fingerprint analysis may be a valuable instrument in the early detection of neurological abnormalities among newborn infants, according to the Neurological and Sensory Disease Service of the PHS. An investigation is being conducted into the patterns of palm and fingerprints of patients with various neurological disorders—including congenital abnormalities such as hydrocephalus and mongolism. This study is expected to involve about 5000 patients. Field work is expected to be completed in the next six months, and results may be available within a year.

Findings On Enovid

Findings of a closely supervised medical experiment involving Enovid support the judgment of Governmental panels that Enovid is safe for long-term, continuous use. Only women who had been using the pill for 25 months or longer were admitted for the tests.

One of the most difficult studies in the investigation was that of thrombophlebitis, its incidence in women in general, and particularly in the segment taking Enovid. Since normal statistics were not available, a concentrated and continuing test was carried on under close medical supervision in selected clinics of the Planned Parenthood Federation. The FDA was informed and given the data regularly as it was developed. Out of 5000 patients examined, there were only eight new cases of thrombophlebitis. In an average of nearly three years of Enovid use, this is very nearly equivalent to the lowest incidence of thrombophlebitis ever reported in a similar population of women.

Census Report On Drug Sales

A report by the Census Bureau in its series on pharmaceutical industry sales shows the breakdown of the 1963 volume—$2 billion—for ethical drugs in major product categories. Listed in order of sales volume they are: 1) drugs acting on central nervous system and sense organs; 2) drugs affecting parasitic and infective diseases; 3) drugs acting on digestive or genito-urinary systems; 4) drugs affecting neoplasms, endocrine system and metabolic diseases; 5) drugs acting on respiratory systems; 6) drugs acting on cardiovascular systems; and 7) drugs acting on skin. *Identification of the census bureau report is U.S. Department of Commerce. . .*

Death Certificates

The Wilmington Department of Health has provided the following information about death certificates with the request that it be brought to the attention of physicians:

Death certificates are required by state law to be filed at the office of the registrar for the area in which the death occurs within 72 hours after the actual occurance of death. The causes of death must conform to the International Classification of Diseases as Causes of Death. In the case of accidents, how, when, and where the accident occurred must be given. In the case of communicable or infectious diseases, the cause and type must be given if known. If the cause or type is not known, it should be stated as "cause undetermined" or "type undetermined," whichever is applicable. In the case of inflammatory processes that are not general and are limited to one area, organ, or system, this information should also be given. Terms like meningitis, encephalitis, erysipelas, septicemia, etc., are really not complete enough from a medical standpoint for the proper assignment as to the cause of death. Terms like senility, natural causes, old age, malnutrition, inanition, etc., are too vague.

Personal Glimpses

Floyd I. Hudson, M.D., was elected president of the Association of State and Territorial Officers at the organization's meeting in Washington, D.C. During the past year the same association conferred the *Arthur T. McCormack Award* on Dr. Hudson in recognition of his 25 years of meritorious service in the field of public health . . . Dewey A. Nelson, M.D., addressed the Philadelphia Neurological Society on December 11 on the topic, *Neurological Manifestations of Antipyrine* . . .

Highlights Of The Year's Medical News

- In 1964 medical scientists found some strong evidence for the viral theory of human leukemia: the possibility of transmission by insects was a strong argument. Although investigators have been testing the theory of leukemia in animals for more than 50 years, there were several reports of virus isolation from human leukemia in 1964 that excited medical interest. This prompted the National Cancer Institute to push a new multi-million dollar research program with funds voted by Congress. Most leukemia investigators point out that a leukemia vaccine is probably many years away and too much talk about it at this point would only cruelly raise the hopes of leukemia victims and their families.

- Investigators of viral hepatitis were heartened by the report in a laboratory animal. A hepatitis vaccine may be on the horizon if the work carried out in 1964 is substantiated and extended.

- Harsh judgments were rendered on cigarette smoking by the Surgeon General's Advisory Committee of the PHS. They found statistical relationships between smoking and several respiratory diseases, lung cancer included. Seeing this in black print caused a worried public to become more apprehensive. Concern expanded within the medical profession. Studies were sponsored by the AMA, disbursing the money to independent investigators, to determine the relationship between smoking and health.

- The concentrated light beam of laser burned a place for itself in medicine when used for experimental treatment of melanoma.
- Ultrasound emerged as an important diagnostic tool and has already moved into the hospital to be used in place of x-ray or as a supplement.

- In sections of this country the medical news of the year was an epidemic. Infectious encephalitis appeared in extensive parts of Texas and to a lesser extent in Kentucky, Illinois and Idaho. Then it cropped up in lower New Jersey. The PHS announced that these epidemics seemed to involve the same virus—the *St. Louis type.*

- The "thalidomide incident" of 1961 continued to echo in 1964 with the announcement that the AMA and the FDA would begin to trade information on drugs and therapy in a new program of cooperation and computerization. A registry of pathologic specimens from adverse drug reaction cases will be maintained at the Armed Forces Institute of Pathology, Washing, D.C. The AMA, FDA and PMA will furnish cases. The AMA file will be maintained by the Central Registry of Adverse Reactions to Drugs and Chemicals.

Delaware Academy of General Practice

THE CONTINUING EDUCATION PROGRAM

Since its founding, the American Academy of General Practice has required each member to take a minimum of one hundred and fifty hours of post-graduate medical courses every three years. To our knowledge ours is the only medical society in this country which requires this as a condition of continuing membership.

With this as stimulus, our Delaware Academy of General Practice has developed a strong educational program. At first our courses were aimed at the needs of the general practitioners only. Then we were surprised to find an occasional specialist attending. It dawned on us that our programs could fill a great need by bringing to each specialist a review of medicine's changing content in specialties other than his own.

In 1964 we have had a psychiatry seminar, a symposium on diseases of the chest, an elaborate course on advances in internal medicine, and a symposium on emergency room care.

The psychiatry seminar was especially practical. There were two sessions on child problems initiated by interviews of problem children followed by thorough-going discussions of techniques the practicing non-psychiatrist physician can employ to help. An afternoon was spent on several deviates, ways to recognize them, ways to help them. Another session dealt with problems of aging. One week each was spent on the anxious patient and the depressed patient. Much of a practical nature was learned from the sessions on alcoholism and barbiturate habituation. Finally in the seminar on marriage counselling we were given an insight into the many problems back of marital conflict and how the family doctor can help resolve the conflicts.

In planning now is another series of weekly psychiatry seminars to start in January 1965. There will be two independent series; one on Wednesdays, one on Thursdays. Each will run for ten or twelve weeks. A psychiatry professor from Jefferson Medical College will serve as the moderator for all the sessions, but will bring with him each week a different psychiatrist who will be "guest discussant" for that day and will be a specialist in the particular problem to be discussed; there will be no lectures, but an informal discussion of cases and problems around a conference table. When the subject indicates, patients will be presented and interviewed.

There will be a registration fee of only thirty-five dollars for this course, for the bulk of the expenses will be paid by the National Institute of Mental Health which has given us a grant of three thousand, four hundred and forty-five dollars for this purpose. To sign up for the seminar series, please phone or write to Mr. Lawrence Morris, Jr., Executive Secretary, Delaware Academy of General Practice, 1925 Lovering Avenue, Wilmington.

We hope that again our non-psychiatrist specialist friends will join us.

David Platt, M.D., President
Delaware Academy of General Practice

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